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THE Austrian Empire has scarcely attained that importance in the system of Europe to which its size, population, and great resources entitle it. It has hitherto possessed no bond of connexion beyond a common sovereign and a common faith; but by one of the most remarkable political metamorphoses that have distinguished the present century, an ancient absolutism has been suddenly transformed into a great constitutional state. Its provinces, separated by languages, differences of origin, traditions, manners, usages, and institutions, and subdivided, even physically, by the imperfection of their means of communication, never presented that strong and compact national unity which gives power to France, and which no other European nation possesses in the same degree. The task of conciliating and bringing into harmonious relations the component parts of the great but heterogeneous empire of Austria is now taxing all

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the skill of the ablest of its statesmen. One great portion, indeed, still obstinately refuses to coalesce with the others. The isolation of Hungary continues a source of embarrassment and danger, and the efforts even of the best-intentioned monarch to attach Venice by affection will probably be made in vain. There is, however, one method of reconciling hostile and unmanageable populations which Austria has not hitherto sufficiently tried, namely, to neutralise political discontent by the diffusion of material prosperity. One of the most effectual means of making subjects contented with their Governments is to make them rich. Solid advantages in the form of augmented wealth seldom fail to impress even the most imaginative people: but Austria can never avail herself of the boundless means which she possesses of adding to the happiness of her people until she has made a fundamental change in her commercial policy; and then, instead of being one of the poorest in proportion to her population and her great physical advantages of all the states of Europe, she may become one of the richest and most prosperous. To these means we would direct attention, in the hope that the better the people of England and of Austria understand each other's commercial interests, the sooner that great and lucrative interchange of commodities will spring up between them which must conduce to the advantage of both.

Many causes have long combined to keep Austria singularly low in the scale of material prosperity as compared with most of the other nations of Europe. The economical peculiarities which she exhibits are remarkable. Endowed over a vast extent of her territory with a soil so rich and fertile that it can be compared only to some of the virgin prairies and savannas of the New World, the Austrian empire did not until within a recent period grow grain enough for the consumption of its own people. In 1854 the quantity of grain and flour imported exceeded that exported by not less than 5,630,000 cwts., of which a large proportion came from Turkey, the most barbarous and neglected country in Europe. With plains which resemble in the richness and abundance of their grasses the pampas of South America, and are almost as well adapted for the grazing of innumerable herds of cattle, Austria still imports stock from Servia and Wallachia; and horses, which might be bred on any scale in Hungary, are occasionally procured from Southern Germany and from Russia.\* With forests of almost primæval grandeur, the imports of wood for fuel exceeded until recently the exports. With every conceivable natural advantage for

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\* 'Report on the Commerce of Austria,' by Mr. Elliot, Her Majesty's Secretary of Legation, 1858.

growth of the vine, and with numberless gentle eminences, slopes, and sheltered vales, where the grape acquires its highest flavour and perfection, the wines of Hungary, Styria, Transylvania, and Dalmatia, which might vie with the choicest produce of France and Spain, have, with the exception of a few of the more expensive sorts which are occasionally produced as rarities at the tables of the wealthy, until recently scarce been heard of beyond the limits of the empire. This very imperfect development of one of the most valuable of its resources is the characteristic of a country two-thirds of the population of which is employed in agriculture, and where the grandest river of Europe is available for the transport of surplus produce to foreign shores.

Among the causes which have contributed to keep the natural resources of Austria in so undeveloped a state, must be specified the defects and shortcomings of its Government. Austria retained the feudal system of the middle ages longer than most of the other nations of Europe, and she retained it with many of its most oppressive and injurious burthens. The nobility and privileged classes were far more numerous than in any other European state. The empire, before the outbreak of the revolution of 1848, contained no less than 356,860 persons who claimed feudal exemptions and immunities from the burthens of the state. In Hungary the nobles were in the proportion of one in twenty to the population; and in the other provinces of the empire, although fewer, they exercised generally a very injurious influence. One of the worst consequences of this enormous multiplication of a privileged class was the obstruction opposed to rural improvements. If a bridge, for example, was built, all the nobles were exempt from toll. In Hungary a democratic (if we may so call them) feudal nobility lived chiefly by the oppression of the other classes, and were almost identical with the state itself. But of all the institutions of feudalism in the Austrian dominions, that of the robot was the most pernicious. This was a labour-rent, which prevailed in some of the provinces even down to the year 1848. A small landholder was obliged to work for his lord a hundred and four days in the year, or fifty-two days if he employed oxen. A peasant who occupied a house and garden was compelled to devote a hundred and fifty-six days in the year to the service of his landlord. A ninth of the produce of his land was moreover extorted from him; and all the public burthens from which the great landed proprietors were exempt fell upon him. A tenth of the produce of the soil was also due to the Church. One class of the community thus preyed upon the other; the accumulation of

capital was impossible; and agricultural improvement was the last thing thought of by the rich Hungarian noble, who either squandered his revenue in rude and profuse hospitality on his estate, or involved himself in inextricable debt by indulging in the expensive vanities of Vienna or Pesth. The result of this system was that many millions of acres of the richest soil in the world, which, with a small expenditure of capital, might have been reclaimed from the morass, the marsh, and the fen, remained unproductive, for an immense portion of a country which might be made the granary of Europe is still in a state of nature.

It cannot, moreover, be denied that notwithstanding its paternal character the government of Austria for a long period lagged behind the progress of modern improvement, even in matters which could not in any degree come into conflict with the principle of absolutism. It would be difficult, nevertheless, to name any government which has been actuated by better intentions, or which has laboured more steadily to promote the public good. The objects it had at heart were, however, often defeated by the means adopted for obtaining them. For a long period there was no supreme responsible ministry. The business of the State was conducted in a number of court offices or aulic chancellorships, where every measure was determined by votes. Some conception may be formed of the complex political machinery of the Austrian empire by supposing all the principal departments of the British Government to be constituted like the old double Government of India in London, which, we may observe, was mainly a Government of review and control. The aulic councils of the Austrian empire were not mere councils of advice; they were deliberative bodies, which might debate for days over a proposition, and then decide on it by a majority of votes. The procrastination resulting from this mode of administering the affairs of a great empire was intolerable, and led to a change of system whereby much of the business of the State was brought before the Emperor himself. In this mode of conducting the business of government everything depended upon the capacity and energy of the Sovereign; and although the Emperor Francis is said to have paid himself the questionable compliment of saying that he had become a very efficient privy-councillor, the multitude of subjects reserved for the imperial consideration threw the whole business of the country into hopeless arrear. Stagnation, and too often corruption, were the necessary consequences of inefficient administration, and the torpor of the empire was the necessary consequence of the irregular action of the heart.

The state of the internal communications of Austria has contributed

contributed almost as much as feudal oppression and inefficient government to retard the progress of agriculture, and to keep the empire poor. To the deficiency of means of transport it is still owing that wheat grown in one of the most fertile provinces of Europe is greatly enhanced in price before it can reach a port of shipment. A cask of Hungarian wine can be sent from Pesth to England more cheaply by the circuitous route of the Black Sea and Constantinople, than from the ports of Fiume or Trieste. The construction of roads is certainly difficult in Hungary. The central districts possess scarcely any wood, stone, or gravel, and the transport of materials from great distances necessarily increases the cost of highways, and makes their repair difficult; but even in the immediate neighbourhood of Vienna the roads are still allowed during winter to remain in a condition which, in consequence of the time consumed in transport, and the wear and tear of horses, must considerably increase the price of all articles of consumption. In this respect Austria contrasts unfavourably even with Russia, where the principal approaches to the capital have been solidly constructed and are kept in excellent repair.

One of the greatest obstacles to the industrial progress of Austria has been the impolitic diversion of a considerable portion of her population from the cultivation of the soil to manufactures, which were brought into existence by a system of prohibition. Communities of guilds and trades were encouraged until they multiplied to such an extent as to destroy almost all individual energy and self-reliance. Every workman was restricted from the day of his apprenticeship to one narrow department of industry. He was bound by indissoluble ties to his master, for whom alone his industry could be made productive, for he could not labour for himself even if his employer did not give him work sufficient to occupy one-half his time.\* Shopkeepers were subjected to the most vexatious restraints. No one could carry on a business without a licence, and the licence when granted only authorised the sale of goods of a specified character, and no tradesman could leave the town in which he was once established. All enterprise was thus extinguished, and the whole system of Austrian industry constituted a vast combination of monopolies which bound trade in fetters worthy only of the middle ages.

The high price of money, and the difficulty of borrowing in a country where the law exempted the nobles from arrest for debt, have operated, with other causes, in depressing the national industry and retarding agricultural improvement. With

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\* Report of Mr. Elliot on Austrian Commerce, 1858.

the rate of interest on Government securities varying from 6 to 7 per cent., money could only be borrowed on terms which considerably diminished the probability of eventual profit; and so little were monetary principles understood in parts of the empire, that the province of Transylvania in 1840 did not possess a single bank. A retail tradesman at that time undertook the transmission of money to Vienna, and he would not even receive deposits unless he was paid a percentage for keeping them.\*

The want of capital has hitherto prevented the growth of an intermediate order between the landowner and the labourer, and the non-existence of an independent, prosperous middle-class has had an important influence in retarding the material progress of Austria. Commerce has been confined within narrow limits, and restricted to a small number of competitors; and society has been divided into two great denominations—the rich and the poor. Banking accommodation has been rarely afforded except to large landed proprietors; and the great stream of public wealth has not been augmented by those innumerable petty rills, the aggregate contributions of which in other countries so vastly augment its volume, and accelerate its course. The rural economy of Austria has scarcely yet reached that stage of development in which rent is produced. There are few persons corresponding to the British farmer who invest their capital in the cultivation of land not their own, and derive from it a comfortable subsistence. Almost every proprietor within the Austrian dominions cultivates his own estate. No social phenomenon can more clearly mark the economical difference between England and Austria. Throughout almost the whole of its varied provinces a prince or noble, although the owner of a domain compared with which the largest of English estates would be thought only a petty farm, rarely lets any portion of it to a tenant; but having erected a sufficient number of farm-houses, he places in each a person of his own selection, and pays him for cultivating the land. The capabilities of the soil are, of course, but lightly tested by this system of farming; and it affords little indication of what the future yield of land might become when science and capital are combined in its cultivation.

The impediments which were long opposed to cultivation of waste-lands must have materially interfered with the course of agricultural improvement. The conversion, for example, of the smallest portion of forest into arable land required the special permission of the Sovereign, because the forest laws had enacted that, in order to prevent a scarcity of wood, the extent of forest-

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\* Paget's 'Hungary and Transylvania,' p. 239.

land should not be diminished; and a lord who desired to purchase even a few square yards of land from his tenant for building purposes was obliged to obtain the assent of the Emperor to the arrangement, because, by a well-meant enactment, the tenant-laws had forbidden the increase of domains from tenant-lands.

To these disadvantages under which the commerce and agriculture of Austria have long laboured must be added the system of State lotteries, which has created a spirit of gambling which is diffused throughout all ranks of society, and has diverted the savings of multitudes from reproductive industry to exciting and often ruinous speculation. More than 20,000,000 florins, or nearly two millions sterling, are annually devoted by the public to this demoralising pleasure. The passion for gambling is indulged by persons of the slenderest means, and even wealthy and respectable firms have sometimes brought themselves to the verge of bankruptcy by such speculations. Lottery agents are appointed even in the remotest and least populous districts of the empire; and the spirit of gambling has become so widely extended that the amount invested in tickets increased from 1850 to 1857 by not less than 150 per cent. The Government obtains a considerable sum annually from this objectionable source; but it is to be hoped that the blot of such a financial expedient will soon be effaced from the Austrian budget.\*

Not the least influential of the causes which have kept the Austrian empire in a state of financial penury and material backwardness has been its frequent political disquiet. It has been constantly contending with the passion of provincial independence, and striving to subdue and extinguish that spirit of clan-ship in some one or other of its numerous provinces which was always aiming at the disintegration of the State. Innumerable conflicting local interests have from time immemorial thwarted the best-conceived plans for the common good. The union even of the German provinces has been often precarious, but the empire has long struggled, and struggled in vain, to reconcile to its dominion a people who are almost unique in Europe. An Asiatic horde burst into the province of Pannonia in the year 883, and it has kept possession, through many vicissitudes, of the territory then acquired. Notwithstanding their long settlement in the very centre of Europe, the

\* It is stated by a writer on Austria that the number of drawings in a year throughout the empire is not less than 450, and that the lowest amount that may be staked is two pence. We have, perhaps, scarcely a right to comment on this financial expedient of the Austrian Government. England was long an offender in the same category; but the lottery system was never carried to the same extent as it is in Austria, and we have long since abandoned our evil course.

Magyars retain to a considerable extent their Asiatic character. Their country now constitutes nearly one-half of the Austrian empire; and from the day that the leader of a nomadic tribe subjugated the country, it may be said that Hungary until towards the middle of the eighteenth century did not enjoy ten years of uninterrupted peace. The introduction of an Asiatic element into the very heart of Europe has necessarily considerably affected the material condition of the territory thus occupied. The Magyar is still essentially a Tartar in his habits, his occupations, and his tastes. He is a herdsman by descent and by inclination; and the peasant shepherd as he stalks over the illimitable plains in his white sheepskin robe might, from his noble bearing and majestic step, be mistaken for a prince of the desert. The magnanimous nature of the Magyar, his language, his Oriental pride, and more than Oriental hospitality, his natural dignity, and even his occasional languor and listlessness, all unequivocally denote his Asiatic derivation and proclaim him of a peculiar race. The Hungarian is rarely a merchant, neither is he by preference an agriculturist, as the steppes of Thibet seem almost reproduced in the great Hungarian plain; to rear horses and tend cattle and sheep are the principal occupations and enjoyments of the Magyar. The villages almost look like encampments, for the houses are built low and apart from each other like tents.

If these people are so distinctly marked, even among the many diversified races of the Austrian empire, the same may be equally said of much of the remarkable country which they inhabit. Hungary is a vast plain sloping to the south, and is surrounded on every side by mountains of different degrees of elevation. The greater part of the country consists of two levels—one 36,000 square miles in extent, or 4000 square miles larger than Ireland. No one portion of this great tract rises 100 feet above the level of the Danube; and, with the exception of a few sandy districts, it comprises some of the richest soil in Europe. The territory which extends from Pesth to the borders of Transylvania, and from Belgrade to the vine-clad hills of Hegyalja, is an almost unbroken level with boundless capabilities of production. The delta of the Nile does not surpass it in fertility. In the hands of a people more advanced in the arts of life it would have long since swarmed with population, and have presented an unexampled picture of agricultural wealth. A large portion of it yet remains the most neglected, the most inadequately peopled, and, with the exception of Turkey, the least improved portion of Europe. The Magyar, even when he applies himself to agriculture, displays chiefly his Asiatic indolence and



and carelessness. No ploughs were used in Hungary until lately but those of the rudest description; harrows were formed from the branches of trees; and the grain is trodden out by horses or oxen in the open field, and then stored in holes dug in the earth. Much of Hungary presents at the present day almost a virgin field for agriculture, and a moderate application of capital would speedily convert it into one of the finest corn-producing districts in the world.

The Austrian empire comprises, since the loss of Lombardy, an area of 11,252 Austrian square miles; and, Switzerland excepted, it is the most mountainous state in Europe. The mountain regions constitute indeed full three-quarters of its area. Austria thus maintains the third rank in geographical importance among the nations of Europe, Russia containing 75,150, and the united kingdoms of Sweden and Norway 13,760, geographical square miles. The Alps, the Carpathians, and the Transylvanian mountains enclose the great Hungarian plain, screening it from the chilling winds of the north, and giving to it some geological features which differ from those of Poland. The Adriatic washes 250 miles of the coast. The geological characteristics of so vast a country are, of course, extremely diversified, and include almost every kind of rock, and every quality of soil. The greater part of the empire lies within the temperate zone. The last Census of 1857, which did not include the army, shows a population of 34,439,067 souls; but it is computed that in the beginning of the year 1862 the empire contained 35,795,000 inhabitants, of which Hungary possessed rather more than 10,000,000, nearly one half of whom are Magyars. This large population is thus divided in respect of race and language:—

Germans	.. .. .	8,200,000
Bohemians, Moravians, and Slovacks	..	6,300,000
Poles	.. .. .	2,200,000
Russians	.. .. .	2,800,000
Slovenians	.. .. .	1,210,000
Croats	.. .. .	1,360,000
Servians	.. .. .	1,470,000
Bulgarians	.. .. .	25,000
Magyars	.. .. .	5,050,000
Italians (inclusive Ladins and Friauls)	..	3,050,000
Eastern Romans	.. .. .	2,700,000
Members of other races	.. .. .	1,430,000

A large proportion of the population (24,874,000) profess the Roman Catholic faith; about 6,600,000 are members of the Greek Church and its branches; while the remainder are chiefly Protestants and Jews.

The

The comparative cultivation of Great Britain, France, and Austria is exhibited in the following table, derived from a trustworthy source :—

	Great Britain and Ireland.	France.	The Austrian Empire.
Land under tillage .. .. .	34	44	34
Vines, orchards, gardens .. .. .	1	5	3
Land in grass, whether natural or sown ..	40	14	17
Forests, plantations, copees .. .. .	5	17	26
Poor land, as heath, marshes, commons; also land totally unproductive, as rocks, sum- mits of mountains, lakes, beds of rivers, roads .. .. .	20	20	20
Comparative population :—	100	100	100
Inhabitants per square mile .. .. .	220	165	130

This table, which, however, was formed before the separation of Lombardy from Austria, suggests some important considerations. The proportion of land altogether uncultivated is nearly equal in Austria, Great Britain, and France; the mountains and commons of England, Scotland, and Wales, and the bogs of Ireland, corresponding to the Alpine provinces of Austria and the marshes and sandy districts of Hungary. In Austria the proportion of land in tillage is about equal to that in Great Britain, and the produce of the most fertile districts of Lower Austria is certainly not less than that obtained from similar soils in England; but in an estimate of comparative value of the agricultural produce of the three countries we have the following results :\*—

Approximate value in francs of agricultural produce (not including live stock) in Bri- tain, France, and Austria	Britain.	France.	Austria.
	6,900,000,000	4,000,000,000	3,000,000,000

The area in tillage, either continuously or by rotation, is 3582 square miles, of which the alluvial district of the Danubian valley, a portion of Moravia, the north-east of Galicia, part of the Bukowina, and pre-eminently the great Hungarian plains, are the most prolific. The quantity of oats produced is considerably greater than that of any other grain, being about double that of wheat; the proportions of wheat, and barley, and

\* The calculation having been made before the separation of Lombardy from the Empire, the proportions would now of course be considerably more unfavourable to Austria.

maize produced are about equal.\* Four-fifths of all the barley and oats are grown in Hungary, Galicia, Bohemia, and Moravia.

One of the principal physical features of the Austrian empire is the great plain or prairie which extends for nearly 300 miles from the Danube to the eastward, and known as the Puszta, or the Steppes of Hungary, where millions of acres might be converted into such a picture of agricultural wealth as is seen nowhere else in Europe. They are divided into three kinds of soils: first, a deep sand, easily worked, and yielding fair crops in wet seasons; secondly, that in the immediate neighbourhood of the Danube and its great tributaries the Theiss and the Temes, boggy in its character and subject to frequent inundations, but which could be reclaimed and made productive at very little cost; thirdly, a rich black deep loam, the fertility of which probably exceeds that of any other known soil. The crops are astonishing; and it is said that when the maize has attained its full growth, a tall man riding on a high horse would be undiscernible amidst gigantic stalks even when they are bent under the weight of the golden ears. Slight elevations occur in this region, but its general aspect is that of an unbroken plain. The vast level, where cultivated, and when green with young corn waving in the wind, can only be compared in its motion and its expanse to the ocean. When a village spire rises in the distance before the traveller, it takes him a day to reach it. Herds of white cattle, flocks of sheep, droves of swine and of horses, give occasional diversity and animation to what would otherwise be a monotonous scene. Villages, few and far between, and nestled amidst green acacias, look like islands risen from the deep. These wide-stretching plains formed the first settled home of the Hungarian race in Europe.

The far-famed Banat is another of the districts of which the produce is extraordinary. This great wheat-growing country lies between the Theiss, the Maros, and the Danube. The Turks were in possession of the province only a hundred years since, but the thought of turning its agricultural capabilities to any profitable use never of course entered their sluggish minds. Nothing could be more wild, savage, and desolate than the aspect of the Banat even in recent times. Immense morasses tainted the air with foul exhalations, and diffused pestilence and death over the neighbouring country. This rank wilderness was termed by the French '*le tombeau des étrangers*;' but, not-

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Oats	..	..	..	..	..	100,000,000 metzen.*
Wheat	..	..	..	..	..	50,000,000 ..
Barley	..	..	..	..	..	50,000,000 ..
Maize	..	..	..	..	..	44,000,000 ..

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\* 1 metzen = 1·691 bushels.

withstanding

withstanding its bad repute, the wonderful fertility of the soil gradually attracted settlers, who were enabled to purchase land at a low price; and Germans, Servians, Greeks, and even Turks, were tempted to risk their lives in a district which promised unexampled returns. The soil is a black loam, which until the end of the eighteenth century had never been turned by the plough. Rapid fortunes were then made; and some of the wealthiest subjects of the Austrian Empire were originally agricultural adventurers in the Banat. Wheat, barley, oats, rye, rice, maize, flax, hemp, tobacco, wine, silk, and even cotton, are the products of this wonderfully favoured region. The climate is more nearly tropical than temperate, and the same crops are repeated year after year. With the exception of the orange and the olive, there is scarcely a vegetable product of Europe that does not thrive luxuriantly in the Banat.

Other portions of the Austrian empire are eminently, but perhaps not equally, rich in cereals. The flat country in the neighbourhood of Salzburg, the Windian Hills in Styria, the country in the vicinity of Laibach and Wippach in Carniola, the lowlands on both sides of the Middle Elbe, and the Lower Eger in Bohemia, also the Moravian Hanna, the north-east portion of Galicia, and the level part of Bukowina, all produce the finest wheat, and their agriculture admits of an almost unlimited extension. Austria is thus pre-eminently a land where Nature, in the distribution of her bounties, has evidently designed that cereal production shall prevail. This truth is being gradually recognised in the Austrian empire. There has been of late a great increase in the production of cereals. We have before remarked that in the year 1854 the imports of grain considerably exceeded the exports; in 1861, on the contrary, the exports largely exceeded the imports. This favourable change in the agricultural condition of the empire appears to have arisen chiefly from the introduction of machinery, the improvement of roads, and more recently from the introduction of railways. Agricultural machines have been found indispensable since the abolition of the robot: labour can now only be procured, as in other countries, by mutual agreement between the employer and the employed, and wages must necessarily be high where labourers are few. Model ploughs, threshing-machines, and many other of the latest mechanical inventions, are imported from England and Belgium, and there is now an extensive manufactory of agricultural implements at Pesth to supply the increasing demand.

Very few countries are adapted by nature for the growth of corn for exportation, since the conditions which render it possible are rare: these are the possession of extensive fertile plains, a favourable

favourable climate, a moderate but not too dense population, a convenient access to the sea, or facilities for transport by great rivers; for railways, if of great extent, unduly increase the cost of carriage. These conditions are found in Austria, Turkey, Russia, Prussia, and Poland, but pre-eminently in Austria and the Danubian Principalities. It is, however, only within the last sixty years that the grain trade has become one of paramount importance to several of the kingdoms of Europe. The nations of the West have gradually become less capable of supplying themselves with food. While thousands of mouths are added daily to the number to be fed, agriculture, with all its marvellous improvements and scientific appliances, is unable to keep pace with the progress of population. A few years ago England was able to feed her own people from the produce of her own fields: she now buys grain to the annual value of more than 12,000,000*l.*; and it is probable that before many years have passed England and France together may be under the necessity of importing corn to the annual value of 40,000,000*l.* Nor need this prospect alarm us. There are districts even in Europe which are able to supply for an indefinite period almost any quantity of grain that we may require. This may well raise the hopes and stimulate the enterprise of countries like Austria, endowed by Nature with a climate and soil which enable them to supply the wants of others less favourably placed, or whose powers of production have been already taxed to the uttermost.

Unfortunately for the interests of Austrian commerce and agriculture, none of the great rivers of the empire have their embouchures in the Adriatic. They are almost all affluents of the Danube, which pours its vast volume of waters, by three mouths, into the Black Sea. It was once proposed to unite the Save, one of the principal tributaries of the Danube, with the port of Fiume on the Adriatic, but the difficulties proved too great. The Danube, therefore, continues to be the principal commercial artery of the Austrian Empire. Its navigation begins at Ulm, which is a *depôt* for goods from France, Germany, and the banks of the Rhine. In its course the Danube passes through the territories of four states, and receives the waters of thirty navigable rivers and ninety lesser streams. Its navigation from Vienna is now almost exclusively in the hands of the Danubian Steam Navigation Company, which, by its successful enterprise and excellent arrangements, has so materially benefited the commerce of the Austrian Empire. New markets have been opened up for the previously unsaleable produce of Hungary and Transylvania. The commercial movement on the Danube, consequent on the introduction of steam, was viewed with great jealousy

jealousy by Russia ; which, after endeavouring for years to obstruct the navigation of the principal mouth of the Danube, had the mortification of witnessing a new vitality imparted to the commerce of the great river by steam, and of being obliged to relinquish the territory which she had long systematically endeavoured to turn to the injury of her neighbours and the world. To Austria the closing of the Danube, it was supposed, would have been a heavy blow ; for Austria had been long regarded, not only as a political rival, but as a competitor in commerce. The repetition of similar acts of barbarism and selfishness has been rendered impossible by placing the embouchure of the Danube in the hands of Turkey—a power whose interests in Austrian prosperity and greatness are the reverse of those of Russia. The commercial importance of the mouths of the Danube is, however, considerably diminished since the completion of a short railway of 40 miles, which connects the port of Tchernavoda, on a bend of the Danube which approaches nearest to the Black Sea, with the port of Kustendjie on that sea, by which 240 miles of intricate and tedious navigation are saved, and goods and passengers are conveyed by a short overland journey to a secure and commodious harbour only 20 hours, by steam, from Constantinople. The corn trade of the whole basin of the Danube is now gradually taking this course in preference to the circuitous river navigation ; and it has even been found cheaper to send barges laden with the corn of Wallachia and Moldavia up the stream from Galatz to Tchernavoda than to navigate ships through the tortuous channels of the Danube to the sea. The first steamboat was launched on the Danube at Vienna in 1830. The subsequent rapid increase of steam navigation has produced a complete revolution in the internal commerce of Hungary. Before the introduction of steam the navigation of the river was carried on in large barges, with high pointed roofs, which gave them a most curious appearance ; and, when unemployed on the river, they were made to serve the purpose of granaries. Drawn by teams of small horses, they were months in making their way from the mouth of the Theiss to Raab or Wiesenburg. There are serious impediments in the navigation of the Danube yet to be overcome before the riches of its upper basin (the future corn field in which, from the quality of its wheat, we are perhaps the most interested) can be made available. The Iron Gates (the *Porta Ferrea* of the Romans) are a great obstacle to the trade of the Upper Danube, and improvements must be made in the navigation of the river in this portion of its course before the produce of Hungary and the Banat can be brought

brought into successful competition with that of the lower Danubian provinces or of Russia. A succession of rapids, rushing past some of the most magnificent scenery in Europe for nearly thirty miles, makes navigation perilous to heavily laden barges, and to draw them up the stream again is a work of considerable time and difficulty. The attention of the Austrian Government has often been directed to this important subject, and doubtless some serious effort will be shortly made to diminish, if not entirely to remove, this great inconvenience. The tendency of the corn trade of the Danube to increase in proportion to the facilities afforded for transport has been very marked.\* The boundless resources of the corn-growing districts of the Austrian empire have hitherto only been made available to an inconsiderable extent for the supply of foreign countries. In consequence of the dearness of labour, of the occasional difficulty in obtaining it at all, the high freight from Austrian ports, and the cost of transit down the Danube, the grain of Hungary and of the Banat has been scarcely able to compete with that of Russia and Prussia.

Agriculture being the natural development of Austrian industry, it is satisfactory to find that the corn trade of the country exhibits a decided tendency to increase. In one of the very able Reports of Mr. Fane, the British Secretary of Legation at Vienna, he points out with great sagacity that causes are in operation which seriously threaten to affect the existing sources of our supply of corn, and that the opening of other sources thus becomes extremely important. The fertile corn-growing provinces of Austria may thus become of the highest value to Great Britain. In 1861, 36 per cent. of our imports of wheat and 62 per cent. of our imports of flour came from the United States. The disturbance of capital and labour which is taking place in America may greatly affect her ability to continue those enormous exportations upon which our people have been accustomed to rely. The exports from Russia, too, in her present transition state, will probably fall off considerably. There are, indeed, symptoms of such a declension in the latest returns. In 1859 Russia furnished 22 per cent. of the wheat imported into Great Britain, while in 1860 she furnished only 13 per cent. The emancipation of the serfs

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\* There passed out of the Danube grain of all kinds in—

	Imperial Quarters.				
1837	..	..	..	..	313,501
1846	..	..	..	..	1,191,649
1858	..	..	..	..	1,626,513
1862	..	..	..	..	2,469,757

could

could not but produce an immediate effect upon the labour of the country, since the enfranchised peasant will certainly not, in his present state of civilization, work for hire if he can supply his few wants by working on his own account. Two causes, therefore, which are operating simultaneously threaten to deprive England of no inconsiderable portion of those supplies of food for which she must now look to foreign countries. The plains of Hungary are formed by nature for the growth of corn. Their present production can be increased immensely, and all that is wanted is a cheap communication with the sea and a moderate rate of freight. A railroad running from Pesth, and connected with the Trieste and Vienna line, was opened for traffic in 1861, and the exports of grain from Hungary were immediately quadrupled. Hungarian wheat is not inferior to the best Odessa wheat; and in a most interesting and instructive paper on the resource and trade of Austria which was read before the Newcastle Chamber of Commerce in November last by Mr. Somers Beaumont, one of the representatives in Parliament for the borough, it was stated that Count Edmund Zichy, whose wheat always obtains the preference in foreign markets, had offered to sell the whole of his crops for a period of five years for 33s per quarter, delivered at the railway station.

There is another aspect in which the importance of increased supplies of grain from the Austrian provinces may be regarded namely, the very probable diminution of cereal cultivation in England, in consequence of the preference now given by many farmers to the rearing of stock. This subject has for some time created much discussion among our agriculturists, and a paper was recently read before the London Farmers' Club,\* strongly recommending a change in the traditionary system of farming. The special fitness of our climate for the growth of green crops, grass and roots, was especially dwelt on, together with its unsuitableness for grain-crops, compared with those countries with which the farmer has to compete. The propriety of laying down all inferior arable land, especially on the western side of the island in grass, was strongly urged. Exposed to all the boisterous wind and rains of a northern climate, our island, it was said, is placed under very unfavourable conditions for the production of wheat, a fact amply confirmed by the uncertain yield and frequent failure of our harvests. The cereals, it was remarked, are natives of a warm climate. Wheat, requiring a high temperature to bring it to perfection, thrives best on the dry continental plains; and the

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\* By Mr. R. Smith, of Emmett Grange, South Molton.



best samples of grain which we are ever able to show are invariably the produce of a hot summer. The mean summer temperature of the British Islands varies from 54° to 64°. On the great Hungarian plains, and other districts of the Austrian empire, the average summer temperature is from 73° to 77°. England is therefore placed relatively under very disadvantageous conditions for the production of corn, while she need fear no rival in the raising of stock. The demand for meat by a rapidly increasing population is enormous ; it costs less to produce ; grazing and feeding require a smaller capital than arable farming, and they involve less risk. A change in the present character of our husbandry, by laying down a larger proportion of the land in artificial grasses, pasture, and green crops, seems therefore highly probable. The profits of stock-feeding must necessarily increase, while the gains from the production of wheat will probably diminish. The British farmer has to compete in cereals with the most highly favoured countries of both hemispheres ; as a breeder of cattle and sheep he may challenge the competition of the world.

The forests which clothe the sides of the great mountain-ranges of Bohemia, Styria, Croatia, Transylvania, parts of Hungary, Dalmatia, and the Tyrol, have at last been turned to profitable account. We have observed that in 1856 Austria imported fire-wood ; she now exports it. Hungary is rich in oak timber, much of which is well adapted for ship-building ; and whenever the port of Fiume is connected by railway with the interior, the export of one of the most important staples of the country will doubtless be largely increased. England has hitherto received the greater portion of her materials for ship-building from the Baltic ; but, although the tendency now is to build the larger ships of our commercial marine of iron, a valuable trade may be expected to spring up in an article which will always be in demand. The hemp of Hungary is quite equal to that of Russia. It was used in our dockyards while the supplies from the Baltic were suspended during the Crimean war, and it gave unqualified satisfaction. The importance of obtaining a regular supply of an article so necessary for our navy, from a country with which our relations are never likely to be otherwise than friendly, need not be insisted on. Hungary is well adapted for its growth, and it supplied us at a time of need with a considerable quantity, although, the demand being unexpected, there was no increased cultivation to meet it. Its growth could be greatly extended in Hungary. The same may be said of flax, for the

production of which the north-eastern provinces are especially suited, as are those both of the south and east for hemp. Flax is grown in large quantities on the slopes of the Carpathian Mountains, and almost the whole produce was formerly wrought by domestic industry into a coarse linen for home consumption. For a long period very little of the linen produced found a demand in foreign countries; there are now thirty-three manufactories, situated in Bohemia, Moravia, and Silesia. Importations of table-linen from Saxony, which once supplied the whole of Austria, have entirely ceased, and she now exports productions of a very superior quality, with tastefully figured patterns, to America, Turkey, Russia, and Greece.

It is a striking proof of the value of Lombardy to Austria, as well as of the imperfect development of her other great resources, that the silk exported from that rich province alone constituted more than a third of the exports of the whole empire. The export of silk has of course greatly diminished. Of wool the production is large. The finer sorts are grown in Hungary, and form one of the great staples of the country: they are exported to a large extent to supply the manufacturers of the Zollverein, of France, and of Belgium. Austria imports the coarser wools for her special manufactures, and exports the finer kinds. The great landed proprietors pride themselves on the fleeces and breed of their sheep. The Esterhazy wool is almost as famous as are the diamonds of that brilliant magnate.

Nothing is more surprising in the industrial economy of the Austrian empire than the very inadequate development of its great mineral resources. Almost every known metal exists there; and if we except Upper Austria, Dalmatia, and Venice, the most important of all is found in every province in profusion. Much of the iron required in the manufactures of the country is nevertheless imported, notwithstanding the very high customs' duties, from England. Hungary possesses enormous deposits of iron ore, and in previous ages they were not neglected. Near the town of Hunyad, where only a few iron-mills are now at work, there are traces of ancient mining operations on an enormous scale, and the roads are still black with the slag and ashes of extinct furnaces, proving the district to have once been a great hive of manufacturing industry. It was here, Professor Ansted says, that the Dacians forged the spears that long prevented the Romans from forcing the passes of their country; and here the Romans themselves smelted the iron, and fabricated the steel from which they fashioned those short but trenchant swords  
with

with which they so well knew how to keep down troublesome nationalities.\* The growth of gigantic trees on the sides of the hills where the former workings took place, proves the length of time they have remained neglected. Professor Ansted, who recently visited several of the most important mineral districts of Hungary and Transylvania, says they are capable of producing the purest and most valuable iron, especially suited for the manufacture of steel. Styria and Carniola furnish more than two-fifths of the iron consumed within the Austrian empire. Railway communications would rapidly increase this department of industry. The desire of the Government to make the mines subsidiary to revenue has hitherto retarded their progress and checked private adventure. The mines of Rusberg, which while they were in the hands of the Government afforded employment to only 100 men, are now worked by two foreign capitalists, who employ 800. The iron mines of the empire are in a state of progressive improvement, and afford employment for 279 smelting furnaces; but they very inadequately supply the increased demand, nor can they be expected to do so until a larger amount of capital is applied to them, and the communications between the producing districts and the other portions of the empire are in a more satisfactory state. The Styrian iron is everywhere spoken of as excellent, and as especially adapted for the iron plating of ships.

The great deposits of iron which Austria possesses would be comparatively valueless but for the presence of coal. This mineral however has been found in abundance. The production of coal has increased within thirty years to more than twelve times its former amount. In Hungary, before steamboats were introduced on the Danube, only one coal-mine was known. Great deposits of different degrees of value have been since discovered in the lias formation. The coal of Stenerderf is used in the steamers which navigate the Danube, the Theiss, and the Temes, as well as on the railways; and it is also employed for the manufacture of gas, and for domestic purposes in every town and village to which it can be conveniently conveyed. The great coal-field, which extends from the base of the Austrian Alps through the great plain of Hungary to the foot of the Carpathians, contains one large group and many smaller groups of deposits. The coal of this extensive district varies in quality, but much of it has been found good, and has been extensively worked. The coal of Hungary is of almost all geological ages; and although much of it may prove commercially valueless, and

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\* Professor Ansted's 'Hungary and Transylvania.'

unfit for domestic use, coal of a superior quality, sufficient to last for centuries, has already been discovered.\*

The gold and silver mines of Hungary and Transylvania, although they have not lately contributed much to the wealth of the empire, are too important to be passed over in an enumeration of its resources. The Hungarian proverb, that Kremnitz possesses walls of gold, Schemnitz of silver, and Neusohl of copper, is expressive rather of their former than of their present importance. Mines of the precious metals near those places were worked in times anterior to the Romans. Gold and silver, and even gems, are more important, Professor Ansted says, in the estimate of the mineral wealth of Hungary than in any other European country, being not only widely distributed, but really large in quantity, and the mines might be worked with every prospect of permanent success. Silver occurs in regular veins, and gold is found in sandy and gravelly deposits, like those of Australia and California. All have proved sufficiently rich to repay the cost of working, and they are justly entitled to be included among the material resources of Austria. The geological position of the gold presents in some places remarkable peculiarities. In Transylvania it is found in porphyry; in Bohemia in crystalline schistous rocks; and in the Tyrol and at Oravicza, an important mining district in Hungary, in a peculiar sandstone, traversed by small veins of micaceous iron-ore.† It also occurs in the sedimentary strata of Transylvania. Numerous rivers and brooks are also prolific of gold; but the washings of the Maros, Szamos, and other Hungarian streams, although formerly rich, have much diminished in productiveness through mismanagement. The workings, when more generally systematised and placed under skilful direction, will doubtless add largely to the wealth of the empire.

The production of silver, as well as of gold, might also be largely increased, if capital were applied to the development of the mines. As to a large portion of the mineral districts of Hungary and Transylvania, it is doubtful whether it has been even surveyed with a view to its mining capabilities. The whole of the frontier of the Banat, Professor Ansted thinks, might be subjected to a searching investigation with a great probability of success. Some of the lead-mines are highly argentiferous, and one of the lodes is enormous, varying from

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\* We must refer such of our readers as may be desirous of more detailed information respecting the iron deposits of Hungary, their extent, capabilities, produce, and geological peculiarities, to the very complete and valuable little work, the joint production of Von Cotta and Von Fellenberg, the title of which we have prefixed to this article.

† Ansted's 'Hungary and Transylvania,' p. 455.

three to fifty feet in width.\* The silver-lead ores are abundant both in Hungary and Bohemia. Of copper, four-fifths of the quantity produced comes from Hungary. The ore is worked at Oravicza and at other places in the Banat, where a deposit of great value was discovered in the last century. The junction of a number of veins contributed to form a 'bunch' of extraordinary dimensions. The deposit, at its largest part, was 150 feet long, 120 feet wide, and 240 feet in depth, presenting a mineral mass unparalleled probably in the annals of mining.

The accumulations of salt within the limits of the Austrian empire are some of the largest in the world, but its working and sale are state monopolies. The quantity annually raised from the mines is four million cwts., and this amount, large as it is, might be vastly increased. The policy of making so important a necessary of life a government monopoly is believed, as in the case of most other monopolies, to defeat itself. Bulky as the article is, smuggling is carried on in it to an immense extent. Neither mountain barriers nor custom-house barriers prevent a steady contraband traffic, and the Government, here as in other countries, has proved no match for the smuggler. 'The whole line of the frontier,' Mr. Paget wrote in 1837, 'from the Adriatic to the boundaries of Russia, is well adapted for smuggling; and salt is smuggled along the whole of the frontier.' The salt officers in Hungary told that gentleman that they invariably bought their salt from smugglers, and he doubted if there was a single great proprietor in the south of Hungary who purchased Government salt. Austria and Spain are the two most restrictive nations of Europe, and in both the contrabandist finds his occupation pay better than a legitimate trade. A small percentage on the value of the articles which it is wished to introduce across the frontier generally secures the transit. The smuggling trade with Russia is believed to be particularly active.

The cultivation of the vine within the Austrian territories is carried on to a greater extent than, with the exception of France, in any other country in Europe. In France the vine is grown over 9748 geographical square leagues; in Hungary it covers 6171 geographical square leagues. It stretches with its long green rows over fields infinite in number, and gladdens the hill-sides and even mountain-tops. The smallest proprietor possesses his vineyard, for the water of Hungary is so bad that wine is the common beverage of all; nevertheless, with all its cheap and overflowing pro-

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\* The Felso Banya.

duce, the country is essentially a sober one. Austria, in regard to the quantity of wine produced, holds the second place among the nations of Europe. The grape is raised on almost every variety of soil, from the slaty, granitic detritus, or volcanic ash of the mountain-side, to sandy plains and rich alluvial mould. In Hungary, which is pre-eminently the wine-growing district of the empire, the best vineyards are generally planted upon hills of some elevation. The Badacsony Mountains, which form a vast amphitheatre round the shores of the Great Lake of Balatan; the arid heights of Mènes, which overlook the rich plains of the Banat; and those of the Tokay district, are covered with vines wherever there is a favourable exposure and a suitable soil. This adaptation for the growth of the vine is found in many other parts of the empire. Transylvania is capable of taking a high position as a wine-producing country. It consists almost entirely of hills of no very considerable elevation, and much of the soil is of volcanic origin. The wines made in Transylvania, although said to be excellent, have possessed hitherto only a local reputation, being scarcely known even in the adjoining provinces. They are not so strong as some of the Hungarian wines, but less acid, and they are said to possess considerable body, bouquet, and flavour. Lower Austria and Styria are also capable of producing excellent wines. The abolition of the duties, which long interposed almost insuperable commercial barriers between Hungary and other parts of the empire, has excited a lively emulation between the different wine-growing provinces, and there is every probability that this branch of the national industry will soon be in a very flourishing state. To communicate a taste for the wines of Hungary, Transylvania, and Lower Austria, by offering them at such prices as may induce other countries to give them a fair trial, ought now to be an object of special importance. What has been said of Transylvania applies equally to Styria, where the high vernal and autumnal temperature is extremely favourable to the production of wines which, from their considerable body, flavour, and cheapness, would probably, if sufficiently known, be largely consumed in the north of Europe. But it is more especially to the wines of Hungary that attention should be directed, for they have been pronounced by one of the most competent judges in Europe to be drier than those of France, more mellow than those of the Rhine, and more piquant than the choicest of Spain.\* They are commonly divided into four classes:—1, Liqueur wines; 2, good dry table wines; 3, effe-

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\* 'Notes on the Vineyards of Hungary,' printed anonymously.

vescent wines; and 4, ordinary wines of consumption. The celebrated Tokay wine comes within the first classification, together with some others which are not adapted for general use. It is among the sound dry table-wines that body, delicacy of flavour, and aroma are to be found in perfection.

The late reduction of the English duties now gives the producers of these wines a fair chance of competing successfully with those of other countries. It was a measure which the Hungarians long earnestly desired, as certain to lead to very extensive transactions with England. They hope to diminish the consumption of home-made wines, of beer, and of ardent spirits, by the middle and labouring classes of this country, in offering them as a substitute at a moderate price a sound and palatable beverage, superior in body to any of the cheap wines of France, and free from all adulteration.\* It is at least extremely doubtful whether a considerable portion of what is now commonly sold as low-priced foreign wine is wine at all. The factitious production of wines both in Germany and France is carried on to an incredible extent. M. de Szemere † accuses the Germans of not only sweetening their wines, but of saturating them with sulphur to diminish their acidity. In many French wines he says all is false—colour, strength, and flavour; and the chemists have attained such skill in their infamous art, that even science is incapable of detecting the spurious from the true. Half the population of Paris, he asserts, drink under the name of wine a mixture that does not contain one drop of the juice of the grape.‡

But what are the prospects of a regular supply, and what are the prices for which good Hungarian wines could be sold in England? These wines have been hitherto almost entirely unknown in this country; the choicer sorts may be found in a few private cellars, but the wines of Hungary

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\* The wines of Hungary are naturally stronger than most of the European wines, having more alcohol in their composition. They contain also a larger proportion of phosphorus, an element of great importance in the human system.

† 'Notes on Hungarian Wines,' by De Szemere, p. 15.

‡ Paris and Cette are the principal seats of this fraudulent manufacture. This dishonest art, says M. de Szemere, is now so perfect, that even clever chemists can with difficulty distinguish the true wine from the false. Such was the case in a very recent trial. The chemist, after enumerating all the ingredients of which the wine was composed, observed that, if one of them had been in a less quantity, he would have been unable to distinguish it from a genuine wine. The prosecuted wine-merchant, who was present, listened attentively to the chemist's evidence, and asked him which ingredient it was. The chemist very imprudently told him; and the accused immediately answered, 'I am very much obliged, Sir; and I don't regret now my forty hogsheads of wine which will be destroyed, because I am now certain of my business.' Not only the strong but the light wines are counterfeited in this way.

are as little heard of and consumed as those of Asia Minor or the Levant ; for of the 2,532,000 gallons annually exported from Hungary, not more than two or three thousand have ever been sent to Great Britain. The cost of bringing Hungarian wines to England has hitherto operated almost as a prohibition, for the low-priced wines of France could always be sold in England cheaper than those of Hungary. The disadvantages under which the Hungarian producer labours in this respect, however, are in a fair way of being removed. The prime cost of some of the wines well adapted to English tastes is remarkably low. An eimer (equal, according to Mr. Dunlop, to about six dozen bottles) of Hungarian wine of good ordinary quality can, Mr. Fane says, be bought at Pesth for 20*s.* ; but the cost of transporting that quantity to England in the cheapest possible way would be 12*s.*, while the same quantity of common Bordeaux wine, costing in France 27*s.*, could be deposited in London for 3*s.* The first condition of an important wine-trade between Austria and England must be an improvement in the quality of the ordinary wines. The choicer sorts are made with care, and command high prices ; but the great body of Hungarian proprietors are, it is believed, now alive to the fact that, although they possess the largest and the best district in Europe for grape cultivation, the wine which they produce is by no means so good as it ought to be. The whole system of wine-making has been hitherto extremely rude. Mr. Dunlop, whose admirable Report on the Wine Cultivation of Hungary cannot fail to prove of substantial service to that country in pointing out its many defects as well as the real wants of England and the manner in which they may be supplied, states that the annual production of wine in Hungary cannot be less than from 350,000,000 to 400,000,000 gallons.\* The quantity of old wine in the country available for exportation is probably not large ; but the stock of choice wines accumulated in the principal towns, such as Ofen, Pesth, and Presburg, is believed to be immense, as is also that contained in the episcopal and manorial cellars, and in those of the great landed proprietors. ‘There are

\* The exports of Hungarian wine are in the following proportions to different countries :—

Prussia	..	..	..	..	..	264,000 gallons.
Poland	..	..	..	..	..	312,000 „
Russia	..	..	..	..	..	67,200 „
Turkey	..	..	..	..	..	144,000 „
Switzerland	..	..	..	..	..	504,000 „
America	..	..	..	..	..	624,000 „

Switzerland has, it is said, since the vine disease, imported large quantities of red Hungarian wine for the purpose of converting it into low-priced clarets and Burgundies. Our countrymen are doubtless well acquainted with these wines.

landlords



landlords in Hungary,' says M. de Szemere (for Hungary, like England, is the land of large estates), 'who produce yearly from 1000 to 20,000 hogsheads of wine. Enormous cellars cut into the mountains extend their dark ramifications like labyrinths or catacombs, where the wines are ranged year by year. It is a kind of aristocratic and family pride to possess a full and rich cellar, and grandchildren drink of the wine produced by their ancestors and gratefully remember the old times.' In these primitive lands ancestral glory consists almost as much in a chronology of casks as in a pedigree of illustrious descent. There faith may be really entertained in old wine, which would certainly be difficult either in Germany or France.

The production of wine in Hungary might of course be greatly increased by enlarging the area of vine-culture. The most sanguine of the wine-growers calculate that England might, with advantage to itself, take from Hungary annually wine to the value of between two and three millions sterling, and one of the most eminent of the Pesth wine-merchants submitted the following statement to Mr. Dunlop:—

'The red wines of this country, being principally of mountain growth, are of good strong quality, so that at least two-thirds of them might be safely exported. There is little of this strong wine drunk in Hungary. In quality there are hardly any so light as the so-called Medoc; but many sorts are capable of competing with some qualities of Bordeaux and Burgundies. Of the white wine more than half grows in the plains of the country, and it is in consequence of this that the (lowland) half is of an inferior quality; but there are about 8,000,000 eimers of white mountain wines which are well suited for exportation.

'It is no exaggeration to state that, if Hungary now saw a clear way open for the export of her wine, she would make planting arrangements to supply any demand within the bounds of probability from foreign markets, and would equally increase her care and attention as to the qualities required.'

An English wine-broker of experience lately wrote to a wine-grower at Pesth:—

'I calculate that for carefully prepared full-bodied Hungarian wine you ought to receive about 24*s.* sterling the eimer in your town. This calculation is grounded on the fact that there is no wine, however bad, that can now be produced at 12*l.* per pipe in the growing country. There is at present no wine procurable in Spain and Portugal, and fit for England, at less than 24*l.* per pipe—nine eimers make one pipe—and this is of the very commonest quality, whilst the Hungarian wine is of remarkably fine quality. For the "masses" in England, the clarets and even the Burgundies of France are too cold; they do not suit a rainy climate. Hungarian wines, if properly made and prepared, are the *juste milieu*, and would at once

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come into favour. After a lengthened examination of these wines in the cellars of Hungary, in the year 1855, I said at once that they were the finest materials for wine which I had ever seen. They will, with skill and careful manipulation, come out when in perfection, in an unbranded state, like a very rich and full Sauterne or Burgundy, but stronger in body than either, and these are the wines we want in England.\*

We have moreover the authority of one of the first wine-merchants in the city of London for stating that whenever he is in a position to sell a really good Hungarian wine for 16s. per dozen, he will undertake to drive all the low-priced French wines out of the market. That price will, he believes, give an ample profit both to the grower and the importer.

In the Austrian Catalogue we observe that a chemist of Pesth sent to the Exhibition a variety of essences and oils 'adapted for the production and improvement of wines,' from which we infer that the art of imitating the juice of the Hungarian grape is not altogether unknown in the country of its growth, notwithstanding the assertion of M. de Szmere that his countrymen have, and really sell, old and pure wine, and, as a people of primitive manners, 'treat it like a holy virgin which it would be a deadly sin to pollute.' It is to be hoped that this sentimental morality will bear the trial of a more extensive intercourse with the world. It is however satisfactory to learn that any tampering with the dry table-wines of Hungary is, owing to their inimitable characteristics, almost impossible; but a purchaser of the liqueur wines, into which spices and herb-decoctions often largely enter, might possibly fail to obtain the genuine juice of the grape. Much remains to be accomplished before the Hungarian wine-growers can reasonably calculate on an extensive demand for their produce in England, but we believe it to be in their power to secure it. Several of the prices current of these wines now in the British market are before us. They are offered at rates ranging from 15s. to 60s. a dozen, which give them little chance at present of competing with Rhenish and French wines, for the few low-priced wines advertised are not of a quality to give satisfaction.

Manufactures in Austria have been artificially stimulated, while the agricultural resources of the country have been comparatively overlooked. The most fatal blow ever dealt to a healthy commercial intercourse between nations was that given by the Emperor Joseph in 1784, when he aimed at making Austria manufacture for herself by a system of prohibition, and thus created interests which have since stood in the way

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\* Report, 1861.

both of commercial progress and financial prosperity. Frequent changes in the tariff afterwards rendered foreign trade so uncertain and hazardous, that very little produce was ever grown with a view to exportation. The finances of the country have naturally felt the effects of this commercial isolation. Austria, with a population of about 36,000,000,\* possesses a customs revenue of only 1,300,000*l.*; while Great Britain, with a population of 29,000,000, possesses a customs revenue of 23,000,000*l.* The effect of the prohibitive system of Austria was to divert the capital and industry of the country into artificial channels, instead of allowing them to take their natural course. To take for illustration the production of beet-sugar. Tempted by the high duty imposed on colonial produce, and encouraged by the success of the cultivators in France, the landed proprietors in Hungary and in several other provinces laid down immense tracts in the growth of this root. The production of beet-root sugar therefore attained a most unfortunate development, and importations of colonial sugar have almost ceased. To reduce the excessive duties on colonial produce would prove one of the wisest and most beneficial measures which the Austrian Government could adopt. The saving to the population would be a great boon, while the diversion of much of the agriculture of the country into a more profitable course would in time largely benefit the landed proprietors themselves. The eagerness of the people to purchase the better article was proved in 1854, on a temporary reduction of the duty on refined sugar, when the quantity imported was four times greater than in the previous year. The desire of the people to consume colonial produce when they can obtain it may be further illustrated by coffee. In 1844 the duty was reduced by nearly one half, the consumption thereupon increased threefold, and the revenue was very little impaired. In England we are familiar with the almost miraculous effect of reductions of duties in increasing consumption. That the revenue too may be increased by lowering the tariff, within certain limits, has now become a financial axiom. We could crowd our pages with proofs of the success of this policy. A considerable advance in Austria upon the system tried in 1854 would, there is no reason to doubt, produce equally striking results. Applied to colonial produce, it would certainly drive out of the market many indifferent if not noxious substitutes for coffee, which appear to be largely consumed.

Many of the manufactures of Austria are certainly of great merit, and the increased activity of these establishments is proved by the great increase in the annual consumption of coal, which

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\* See p. 9, *supra*.

has risen since 1839 from 10 million to 70 million cwts. As little coal is used for domestic fuel, this increase may be fairly taken as an index of the increase of manufactures. Austria, with her great staple productions, wool and flax, and by means of her central position in Europe, and her abundant supplies of iron and coal, is doubtless justified in regarding a manufacturing interest as one of her legitimate sources of wealth. There are several branches of industry in which her excellence is undoubted, and she has no cause to fear competition. Her woollen, worsted, and mixed fabrics are admirable. The wool of Austria is almost wholly worked up by home industry, and in woven fabrics generally she possesses a large export trade. In leather and its allied manufactures her exports are also considerable, as are those of her highly esteemed glass and earthenware productions. Of the foreign overland trade, three-fifths are carried on with the German States, a seventh with Turkey, a tenth with Italy, a tenth with Switzerland, and a twentieth with Russia and Poland. Of trade by sea, one-fifth is carried on with Great Britain, one-fifth with Turkey and Italy respectively, and one-fifteenth only with France.

The cotton manufacture of Austria was not like those of wool and flax, a natural growth. It took its rise from the linen manufacture, and was encouraged under the mistaken belief that a country which has succeeded in the one must necessarily succeed in the other. Bohemia, the principal seat of this manufacture, labours under considerable disadvantage. Its inland position is unfavourable for the importation of the raw material; but under the stimulus of prohibition the cotton manufacture has been fostered into an interest incompatible with that of the population at large. There are now 350,000 hands employed in this branch of industry, representing an amount of capital deserving every consideration on the part of the Government, and requiring caution in dealing with it so as not to inflict serious losses upon the persons who have been injudiciously encouraged by the State to embark in it.

In approaching the subject of the Austrian tariff, and in considering its bearing upon the commerce of the United Kingdom, we cannot but admit the difficulties by which Austrian statesmen are surrounded in regard to those interests which have grown into large proportions under the forcing stimulus of a prohibitive system. A reliance upon high protective duties has been hitherto the main support of the manufacturing interest in Austria. They have been almost invariably conceded by the Government whenever the manufacturers thought it for their interest to demand them; and other interests, which neither the manufacturers nor  
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the Government considered, have suffered in proportion. Perhaps the greatest obstacle to the rapid development of Austrian resources is the high duty levied on foreign iron. There is scarcely a single production into which the price of iron does not enter; the cheapness of this metal is therefore one of the chief causes of the unparalleled prosperity of England. It is certain that unless the communications of the empire are speedily placed in a more satisfactory state, Austria must draw large supplies of iron from England for the construction of her railways. It is well known that the materials for the construction of the suspension-bridge at Pesth were imported from England, it having been found cheaper to procure the ironwork even from that distance than to manufacture it at home. Notwithstanding the abundance of the ore throughout the country, many of the districts which produce it are so remote from good roads that they cannot be regarded at present as available sources of supply. This discouragement of the importation of an article at present of the first importance to Austria is in the highest degree impolitic. Any apprehension that the mining interests of the empire would sustain permanent injury is groundless. Such an apprehension was entertained in France after the late commercial treaty, but it has proved imaginary. The ground on which a reduction of the iron duties was demanded by the agricultural interest in France, was that the then existing tariff enabled French manufacturers to force upon the market instruments and machines of bad quality. The result of the reduction was an almost immediate increase even in the export of articles in the manufacture of which it was maintained that France could never compete with other countries. The exports of machinery of various kinds, the year after the importation of iron was admitted at a reduced duty, were nearly doubled;\* and so far were the iron manufactures from sustaining any injury, that the production of cast iron in France has risen from 880,000 tons in 1860 to 1,053,000 tons in 1862, and of wrought iron from 520,000 tons in 1859 to 700,500 in 1862; while the coal-mines, instead of being closed and abandoned, as was predicted, in consequence of the unrestricted admission of British coal, have increased their production from 8,039,109 quintals in 1860 to 9,400,000 quintals in 1862.

A committee which was appointed at Vienna in 1859, to consider the customs tariff of the empire, had under its consideration the state of the iron duties; and a proposition which was then made to lower them slightly on raw iron was negatived by a

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\* From the value of 1,284,000 francs, they rose to 2,000,000 francs.

large majority. A proposition that machine-makers, builders, and proprietors of estates, who required iron for building or repairing houses, shops, or manufactories, should be allowed to import it at a reduced duty, was rejected by a still larger majority. Attempts were at the same time made to increase the high duties upon English cotton yarns, but the exorbitant desire for protection exhibited in this instance received a check from the Government. It should be noted as an illustration of the short-sighted views of the persons then assembled to deliberate on the commercial interests of the empire, that a proposal for admitting engines for cleaning and refining hemp, even for a limited period of five years, was rejected. Hemp might become one of the most important exports of the empire, but it is so coarsely dressed that the foreign demand for it is by no means what it would otherwise be. Good English hemp-dressing machines only are needed to bring Austrian hemp into general use. The agricultural interests of the country were thus sacrificed for the sake of a few machine-makers, who, under the stimulus of a little competition, would probably have succeeded in turning out from their workshops articles quite as good as any that could be imported from England or Belgium. On silk manufactures the duties are enormous, and they must be as unnecessary as they are exorbitant. The gorgeous silks and tissues displayed at the International Exhibition, and their moderate prices, prove that Austria can need no protection in that branch of her manufactures. We will only add that the vast and cumbrous commercial system of Austria is maintained by 515 frontier Custom-house establishments; that it gives occupation to an army of officials whose reproductive industry is thus lost to their country; and that the total Customs revenue of the empire is, as before stated, under 1,300,000*l*.

The commercial movement between Austria and Great Britain is quite disproportioned to the wealth and mutual wants of the two countries. In 1847 the exports of British produce were of the value of 537,000*l*.; in 1861 they had risen only to 968,416*l*., being an increase of only a little more than 400,000*l*. in fourteen years. The total exports from the United Kingdom to Austria in 1860 did not exceed 1,488,008*l*. in value; while the exports to the little kingdom of Sardinia were of the value of 2,297,132*l*., and to Portugal 2,041,236*l*. Now let us compare this almost stationary condition of our commerce with Austria with the recent gratifying increase of our mercantile dealings with France. Our exports to France, chiefly the effect of the commercial treaty, have risen from 6,391,456*l*. in 1854, to 17,417,413*l*. in 1861, of which  
8,633,172*l*.

8,633,172*l.* represents British and Irish produce and manufactures; and the imports from France have risen from 10,447,774*l.* in 1854, to 17,815,119*l.* in 1861, and are still steadily increasing. The change of commercial policy almost forced upon a reluctant people has thus resulted, in a degree scarcely anticipated by the most sanguine, in a vast increase to the prosperity of France. Nor have those interests suffered, the destruction of which was so confidently foretold. In the case of the French fisheries, the reduction of the duty on imported fish was strongly objected to on patriotic as well as on commercial grounds. It would ruin, it was said, thousands of poor fishermen, and likewise diminish the number of sailors available for the Imperial navy. It has resulted in a very large increase in the number both of boats and men employed. Again, in oleaginous seeds, an important article of agricultural production in France, their cultivation, it was said, would cease to be profitable; and the first importations certainly caused a fall in prices, but they have since recovered themselves. The increased importation of almost all articles of consumption, such as cattle, spirits, cocoa, coffee, coke, and wool, has been very marked. Neither has the admission of commodities, hitherto almost excluded by high duties, produced that sudden inundation of the markets which was foretold. There is now even an active competition between the English and French woollen manufacturers; and whereas the latter in the alteration of the tariff saw nothing but their approaching ruin, they now admit that they have been benefited by the change, and that the exportation of woollen goods from France to England is greater than the importation of similar articles from England to France. The imports of French woollen manufactures increased from 1861 to 1862, 18 per cent.; of silk manufactures 8 per cent.; of cotton manufactures 13 per cent.; and the consumption of French wines has risen from 571,993 gallons in 1858 to 1,901,200 gallons in 1862. Importations, it has been now proved, rarely permanently lower the price of a home-produced article. The explanation is simple and intelligible. Imports stimulate demand and increase consumption; and prices, after perhaps a slight temporary decline, not only regain their former level, but often exceed it. These principles the legislators and statesmen of Austria, with the example of France and England before them, can scarcely fail to recognise as at once the remedy for the restoration of public credit and the source of private prosperity. The ability of other countries to become valuable customers of Austria is proved by the increase which has recently taken place in her trade. In one year, from 1859 to 1860, she showed the large increase of upwards of twenty-nine million

million florins, or nearly three millions sterling, in her exports, of which twenty-two millions consisted of cereal produce and fruits. What, then, may not be expected when her commercial relations have been adjusted in conformity to her own true interests?

The National Debt of Austria is about two hundred and fifty millions sterling, which cannot be considered large for a country of such great resources. Austria like other states when in financial difficulties has freely had recourse to the expedient of paper money to meet her immediate wants, and depreciation was the necessary consequence. Scarcely any other country has ever approached so near to the abyss of a tremendous financial catastrophe. In twelve years, from 1847 to 1859, her taxation was doubled, but the public expenditure was tripled within the same period. The State appears to have acted as a reckless spendthrift on the road to ruin. It sold its most valuable domains, parted with its railways for an inadequate price; and the public debt, notwithstanding the extraordinary means resorted to for replenishing the treasury, was enormously augmented. The expenses of the Government rose to frightful proportions, the increase in twelve years having been not less than 87·65 per cent. There is now, however, one proof of the gradual restoration of credit in Austria, which cannot deceive, namely, the state of the exchange with foreign countries. In January, 1861, the exchange on London at Vienna was as high as 156; on the 1st of January, 1862, it was 153; it is, while we write, 121; or, in other words, 10*l.* sterling, which were worth 156 florins two years ago, are worth only 121 florins now,—such has been the increase in the value of Austrian paper, indicating a proportional growth of confidence in the country and its Government.

Railways are gradually connecting all the provinces of the empire. We have already referred to the effect of a railway communication, although a circuitous one, from the interior of Hungary to the Adriatic in increasing the exports of corn. The completion of the line connecting Sissek with the Vienna-Trieste Railway, and the works in progress for improving the navigation of the Drave, will open to commerce some of the most fertile districts in Europe, including the Servian Banat, Sclavonia, and Croatia. It is to the late Baron Bruck that Austria owes the commencement of that system of railroads which is now gradually extending over Hungary and towards the western frontier of Transylvania. The great importance of connecting the Hungarian port of Fiume with the interior did not escape his attention. It involved the necessity of passing through the Julian Alps, those great natural barriers which are interposed between  
Hungary



Hungary and the sea, but a railway will doubtless amply repay any cost that may be incurred in its construction. This important line is now in contemplation, and it will proceed from Fiume to Carlstadt and Agram, and thence to Esgek, thus connecting the richest districts of Hungary with the sea. The railways formed under Imperial concessions have been generally constructed with no special reference to commercial interests, but rather with a view to strategical considerations. The existing lines consist of about 800 miles, and 600 additional miles are in progress.

Among the plans for promoting a more extensive intercourse between Great Britain and Hungary is one suggested by Mr. Fane, by the adoption of which, he thinks, a great and immediate impulse would be given to the commerce of the two countries. He proposes that in some great seat of trade, accessible both by land and water, such as Semlin, free entrepôts and bonded warehouses should be established, and fairs held half-yearly, on the principles of those of Leipsig and Frankfort. Those marts, it is well known, have imparted great activity to the trade of Northern Germany. Mr. Fane thinks, and his official position entitles his opinion to great weight, that a stimulus would thus be given to the purchase of British commodities by the knowledge that Hungarian and other traders would acquire of articles of which they at present know little; and British merchants, through their agents, would become better acquainted with Hungarian produce. The trade in corn, wine, tobacco, tallow, oil, seeds, hides, as well as in horses, cattle, and provisions, would be increased.

That which most strikes a political observer when traversing the diversified provinces of Austria is the extremely heterogeneous character of the population, which includes races in almost every stage of social progress. In the other great monarchies of Europe some one element has absorbed or neutralised the rest. In France, Celts and Provençals have been long merged in the modern French; in our own island, Celts, Saxons, and Normans have gradually lost their specific attributes; but the dominions of the House of Hapsburg are peopled by races which still preserve most of their original characteristic differences, and thus constitute a political problem such as no other state in Europe has to solve. The ethnological and social peculiarities which are found in this great political union are as various as they are interesting. To the Magyars we have already referred, and we can only now touch slightly on a few of the others. If the variety of races within the Austrian empire makes the task of government difficult, it is not without some counterbalancing advantage, for the

number of the 'nationalities' affords a security against the injurious predominance of one. Thus the Magyar element possesses an effective counterpoise in Transylvania, and Transylvania is a natural fortress of extreme political importance, for as long as Austrian influence is paramount there any renewed struggle in Hungary would be in vain. The remarkable people who are most numerous in Transylvania are the Roumans, the descendants of the civilized Romans of Dacia: they have greatly degenerated under centuries of oppression; but their facial contour, dark complexion, and antique costume, denote unequivocally their classic descent, although indolence and superstition have long kept them in a state of social degradation, which presents a marked contrast to many other races of the empire. It is a favourite sentiment with them that God, who takes care of the sparrows who never go to mass, will certainly take care of them who never miss a Sunday at church. The degeneracy of this people is attributable to prolonged Magyar tyranny, which kept them for centuries in a state of abject helotry. A Rouman was obliged to wear sandals instead of shoes; he was not permitted to wear an embroidered coat or a hat; his house was not to be furnished with windows that looked into the street, nor was it allowed to be constructed with a chimney. Much has been done of late by the Austrian Government to elevate this long-depressed people. As the preponderating race in a province very important to Austria, they have lately received much of its attention; for if Transylvania should decide on being represented in the Reichsrath, Hungary must ultimately abandon all pretension to dictate to Austria the terms of its adhesion to the empire.\*

Inhabiting the north-west of Hungary, a district which once formed a part of the kingdom of Great Moravia, is a people which presents a marked contrast to the Roumans and to the Magyars, and indeed to most of the other races of the Austrian empire. The Slovacks have been termed the industrial Scots of Hungary, who go forth with their sobriety, industry, and economy to the most distant provinces, and are found carrying on with success their various pursuits, from Presburg even almost to the summits of the Carpathians. They are an agricultural people, strongly attached to their country, with very marked national peculiarities, cautious rather than impetuous, but, like their prototypes in North Britain, generally ready to proceed to distant lands in search of the good things of life. No people in the Austrian monarchy exercises so great an influ-

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\* The population of Transylvania is 2,409,826, of which the Roumans number 1,349,181.

ence or possesses so much political importance as the Bohemians. The population of Bohemia forms about one-ninth of that of the Austrian empire; but one-fourth of the civil employés of the Government are natives of that country. Great numbers of men of keen intellect, good education, but limited means, annually leave their country to push their fortunes in Vienna, and no other race exercises so important an influence as this vigorous people does on the politics of the Austrian empire. The struggle for national independence made by the Czecks or people of Slavonian blood during the lamentable anarchy of Austria in 1848 has not been renewed, and the Bohemian members of the Reichsrath are generally supporters of the Government and favourable to the unity of the empire. Galicia, although tempted by the Polish outbreak to make common cause with the insurgents, has remained loyal to Austria, wisely preferring the solid advantages of a mild government, light taxation, and liberal municipal institutions, to the phantom of a resuscitated nationality. Upon the Tyrolese the House of Hapsburg has always relied for courage and loyalty in the most adverse circumstances; and, although their bigoted Catholicism has lately objected to the religious toleration which is now one of the principles of the Austrian Government, the empire contains no firmer supporters of its unity. The Croats, although not without some national aspirations of their own which have hitherto prevented their complete union with Austria, are on the whole loyally disposed, and have more than once rendered great services to the state.

One of the most interesting, although geographically not one of the most important of the provinces of the Austrian empire, is that narrow strip of territory which lies between Turkey and the Adriatic, the coast of which, broken into numerous creeks and bays, and studded with islands, affords many admirable harbours and roadsteads. Dalmatia first became an Austrian possession in 1797. The maritime resources of Austria are now limited to the province of Dalmatia and to the ports and harbours in the Gulf of Venice. It cannot be considered an unreasonable ambition of Austria to aspire to some influence on the sea, and to possess a navy which shall be an appreciable element of her strength. To the direction which her views have thus somewhat recently taken, must be attributed that determined hold on Venetia, which neither the political embarrassments inseparable from its retention, nor the very heavy charge upon her finances which its possession entails, will probably induce her to relax. Until her acquisition of Dalmatia, Austria held only a few leagues of coast in the Gulf of Venice. She once possessed a grand opportunity of acquiring maritime importance while the old Spanish Netherlands were

annexed to her empire; but she threw it away. Her flag was rarely seen in waters on which once floated the commercial navies of Europe. She acquiesced in the closing of the Scheldt. So far was she then from desiring maritime importance, that she shut up one of the great highways of nations, and turned a river which had presented for centuries one of the most animated and imposing spectacles the world ever beheld into a commercial wilderness and an almost undisturbed haunt of sea birds.\*

The province of Dalmatia is one of the most attractive of those belonging to Austria. There are to be seen the remains of Roman greatness on a scale of almost unrivalled magnificence; upon its picturesque cities Venice impressed the marks of her peculiar civilisation, and from its ports she drew many of those hardy sailors who gave her the dominion of the sea. One-fifth of the people of Dalmatia dwell on the islands which stud the coast, and the population of the province, owing to the extreme narrowness of its territory, is to a great extent maritime.† The myrtle perpetually perfumes the air; the vine, the fig, and the date vie in productiveness with the olive; and the rich and varied flora of the islands has suggested their resemblance to extensive gardens adorned with the most beautiful exotics. The agriculture of the province is however in the most barbarous state, and the implements of husbandry are as rude as those of Turkey. Silk and hemp might be produced in abundance, but nothing struck Sir Gardner Wilkinson more during his tour through this beautiful province than the almost total neglect of its great and various capabilities. In his most interesting work on Dalmatia he states that although numberless streams might be rendered available as water-power, there was scarcely a mill in the country, and that wheat was sent to be ground in Herzegovina.‡ Iron is still imported from Turkey, although it abounds in the country.

The great centre of the Austrian maritime trade is Trieste. It is the port for a very large portion of Southern Germany, the Banat, and portions of the Slavonian provinces; in fact, for the whole of that portion of the Austrian empire which lies between the Tyrol and Transylvania. Among its chief exports are ores from the mines of Istria and Hungary, and linen, woollen, and tobacco from various parts of the Austrian dominions. The imports include almost every production of the globe. The

\* See 'Quarterly Review,' No. 224, p. 384.

† There are 37 dockyards, private and public, of various degrees of importance, on the Austrian coast of the Adriatic.

‡ 'Dalmatia and Montenegro,' by Sir Gardner Wilkinson. Vol. 1, p. 321.

quays

quays are often redolent of Eastern spices, and the merchandise of all countries is piled on its extensive wharfs. Merchants from every quarter of the world congregate on its exchange, and almost every known tongue may be heard within its walls. At the commencement of the eighteenth century Trieste contained only 6000 inhabitants, but, having been made a free port by the Emperor Charles VI., its growth has since been rapid, and its population now falls little short of 100,000. Few modern continental cities can vie in beauty and solidity of architecture with Trieste. The mercantile community exhibits all the indications of high prosperity. Massive columns of polished granite, rising tier over tier even to the fifth story, adorn the staircases of many private residences, and the green slopes of the neighbouring country are covered with tasteful villas. The whole aspect of this prosperous city, seated on the margin of the blue Adriatic, with its fine roadstead and grand and imposing quays, is calculated to convey a high idea of the commercial importance of a country of which it is the principal port. It has doubtless a great future; and, looking to its position, it would be difficult to imagine a limit to its prosperity.\*

The Austrian imperial naval force in the Adriatic is respectable. Pola, its principal station, notwithstanding its ancient grandeur, is a modern creation: from a poor and long-neglected seaport it has become a fortress of great importance, strongly defended with works bristling with heavy cannon, and protecting one of the best harbours in the Adriatic. The position of Pola at the extremity of the Istrian peninsula is a commanding one, and the power possessing it must exercise a predominant influence in the Gulf of Venice.†

It is obviously for the interest of Europe that Austria should be strong, and therefore that Hungary should accept the new institutions of the empire, which have been framed to embrace all its races, ranks, and interests, and to bring them into harmonious combination in one grand system of national representation. A permanent political separation between Hungary and Austria would be ruinous to both. If, once said an illustrious

\* The Austrian mercantile marine consisted in 1860 of 9803 vessels of all descriptions, including fishing-smacks; 2700 were coasting vessels, 571 ships for long voyages, and 59 were steamboats. The number of men employed was 34,717.

† The Austrian navy consists of 1 ninety-gun ship, 4 sailing-frigates mounting 148 guns, 3 screw-frigates mounting 95 guns, 3 sailing-corvettes, 2 screw-corvettes, 4 brigs, 12 paddle-steamers, 16 steam gun-boats, 3 screw-schooners, 1 floating-battery, 3 galleys, 48 ordinary gun-boats: the whole mounting 725 guns, and with crews numbering 6,398 men. There are besides in the Venetian waters 2 paddle-steamers, 3 steam gun-boats, 6 ordinary gun-boats, and a few smaller armed vessels. The whole imperial navy consisting of 135 vessels of all sizes and denominations, mounting 839 guns, with a total of 7,846 men.

Austrian statesman, we should lose Moravia or Galicia, or even Bohemia, we should lose a limb, but it would not affect our vitality; but the severance of Hungary from the empire would be a sawing asunder at the waist. Hungary, surrounded by jealous and possibly hostile neighbours, would be impeded in its progress to future opulence, instead of participating in the advancing prosperity of an empire of which it forms so conspicuous a part. The Magyars, although predominant in Hungary, are not so numerous as the other races combined, and they have no right to dictate the terms on which those races shall enter the great constitutional temple the doors of which are now open to receive them. Nor are they, with all their noble qualities, the people to develop the material resources of the magnificent country in which it was their good fortune to establish themselves. There cannot be a greater delusion, says an intelligent traveller,\* than to associate the Magyar element in Hungary with civilisation. The noble palatial residences which adorn Pesth and other principal towns in Hungary are the work of German architects, for a Magyar village very much resembles a collection of yourts in Central Asia. Hungary may still have a few reasonable complaints against Austria, but the increased taxation to which it has been subjected, although difficult to be borne by a people which had previously scarcely felt the weight of public burthens, has been in a great degree caused by its own unfortunate revolt. If Hungary should ever succeed in obtaining legislative independence, it is more than doubtful whether this would contribute to its prosperity, importance, or dignity. Ireland never reaped anything but contempt from the corruption and discord of her separate Parliament. It is admitted that Scotland has gained much in every way by its union with England. No race was ever prouder of its nationality than the Welsh, but that nationality survives only in history and romance. The spirit which inspired the Hungarian people in their struggle with Austria was doubtless in some degree a patriotic one; but it is well known that the country was not unanimous, and that no inconsiderable minority sided with and even took up arms for the Austrian Government; and whatever false glory may have been shed over the heroes of the revolutionary struggle of 1848, it is now well understood that it was rather a contest of republicanism and democracy against monarchy, than the general uprising of a people to cast off an intolerable yoke. Material interests will in the end prevail. Railways and telegraphs are the bands of iron that will unite all the provinces of the empire together. The pride of the

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\* Paton's 'Danube and the Adriatic.'

Magyar must yield to the spirit of modern progress, and even the traditions of the past will be swept away by the great stream of prosperity which is already beginning to flow over the country, and which, on a slight change in the commercial policy of the empire, will gladden every household in the land.

Austria is the only great power which has adopted free institutions not in consequence of an irresistible pressure from without, but with the hope of restoring through them prosperity and dignity to a State reduced to a humiliating condition of financial penury and distress. Nor is freedom any stranger to the soil of Austria. Many of its provinces were kingdoms, and possessed charters when the great monarchies of Europe were pure and unmitigated despotisms; and it is especially remarkable that two countries so widely separated, and possessing such different national characteristics as England and Hungary, should have obtained their liberties almost exactly at the same time.\* Hungary, Transylvania, and Bohemia possessed constitutions while other provinces were governed absolutely, although there existed even in these kingdoms corporate bodies endowed with extensive municipal privileges. The Diets were not representative assemblies, but privileged corporations to which many useful powers had been conceded at different times; but these powers neither gave them a direct share in the administration, nor made their consent necessary for the imposition of taxes. The reforming Emperor, Joseph II., discontinued the sittings of the provincial Diets, and administered the affairs of the provinces without their aid: a measure which, it is said, did not diminish his popularity. His successor Francis partially restored them, but allowed them the smallest possible influence in the government. More importance has since been given to these bodies by making them elective, and it is probable they will possess a higher degree of consideration in the future government of the empire than their history might lead us to expect.

The present constitution of the Austrian empire is adapted to satisfy the provinces by giving to them a very large amount of municipal independence. The popular branch of the legislature, or, as it may be termed, the Austrian House of Commons, is invested with almost all the powers that a representative assembly ought to possess in order to exercise a proper influence in a constitutional State, namely, the right of voting supplies; of curtailng, if necessary, the public estimates, together with a general superintendence over the finances of the empire. The power of the purse, the most important element of the British

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\* The one in 1215, the other in 1222.

constitution,

constitution, and which practically places the executive in subordination to a representative assembly, has been apparently fully conceded in Austria. It is a power without which free institutions are a mockery, and a constitution only a name. The loyalty of the Emperor of Austria to the institutions which he has granted to his people presents a strong contrast to the reactionary policy into which the Prussian monarch has been recently unhappily misled. While everything in Austria inspires confidence in the future, and the people vie with each other in devotion to the throne (for even in Hungary all classes profess personal devotion to their King), in Prussia the open violation of the constitution has placed the Sovereign in a state of most dangerous antagonism to his subjects, and a crisis appears to be impending which must terminate either in the total subversion of freedom or in the profound humiliation of the Crown.

The House of Lords in the constitution of the Austrian Reichsrath will largely contribute to the strength and splendour of the State. Austria fortunately possessed the elements of this great institution in a perfection unknown in any other continental kingdom. Princes of the Imperial house, worthy from their character and attainments of taking a conspicuous part in the public deliberations; archbishops and bishops whose titles and order are honourably associated with the history of their country; the heads of noble families, many of them of great antiquity; and commoners, chosen for their eminent virtues and abilities, who have been made peers or councillors for life: these constitute together an assembly which, for independence, dignity, and intellect, will probably bear a comparison with any senate in Europe. The sixteen local Diets hold their annual sessions in the provinces; and, considering the multiplicity and complication of interests in a State constituted like Austria, this combination of a species of federalism with a constitutional imperialism pressing with its weight equally upon all, keeping all in their due relative positions and preventing the unjust predominance of one, cannot but eventually produce the happiest results.

The debates in the Reichsrath have hitherto been eminently practical. The members have shown no tendency to push the privileges conceded to it to an extreme, while temperately asserting and exercising the rights of freemen, and evincing a determination to make the Constitution a reality rather than a name. Nor is there any reason to doubt the determination of the Emperor to give full effect to the principles of government which he has espoused. To his character, as displayed in his latest acts and declarations, Austria may confidently look for that



that consistency by which those unseemly conflicts between the Parliament and the Crown will be avoided, which are the reproach of a kindred State. Francis Joseph has already given abundant proofs that in all the great principles of constitutional government he and his people are agreed. The Archduke Rénier, the Prime Minister, possesses his unqualified confidence, and he might have sought in vain among all ranks and orders of his subjects for one more admirably qualified for presiding over the Cabinet. Calm, sagacious, far-seeing, the Archduke has inspired all classes with a conviction of his attachment to the principles which he has embraced, and which an intimate knowledge of England has only the more strongly confirmed. The two eminent practical statesmen whom the Emperor has chosen to guide him in his constitutional career have each enjoyed peculiar opportunities of becoming fitted for so high a destiny. The political training of Count Rechberg was commenced in England and carried on in Belgium and in Brazil,—countries where he was able to study the working of free institutions and to witness their grand results. M. von Schmerling has not had the extensive experience of his colleague in other countries, but he possesses a very accurate knowledge of his own. He witnessed the errors, the follies, and the disappointments which political inexperience, combined with political enthusiasm, engendered in the Parliament of Frankfort, which aspired in the plenitude of its presumption to regenerate Germany and to construct an edifice of freedom which was to excite the admiration and envy of the world. High-minded, and endowed with a luminous intellect and firm will, he accepted the charge of guiding a constitutional monarchy as the most glorious to which a statesman could aspire.

A general awakening, a thrill of returning political life, now pervades, with the unhappy exception of Hungary, all the provinces of the empire. It is not, however, perhaps, so much the revival of long dormant liberty which now animates the mass of the people as the conviction that their material condition will be inevitably improved by the new system of government which has been so happily inaugurated, and that their country is a vast but hitherto much neglected mine of wealth, in the boundless riches of which they are now certain to participate. England has doubtless the highest interest, next to that of Austria herself, in the great future of Austrian commerce and agriculture. The Prime Minister of England acknowledged this, when he declared at a public meeting that there is no country in Europe, not even excepting France (and we have seen the rapidly-increasing magnitude of our transactions with  
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our neighbours), with which England can carry on a commerce so extensive and beneficial on both sides. With augmented material prosperity, the political importance of Austria will revive. A great constitutional and conservative monarchy in the heart of Europe, connected by political and commercial interests with Great Britain, cannot but prove one of the best securities of peace. The part which Austria once played in the great drama of the world was an imposing one. As the head of the old Germanic Empire, her Sovereign was long supreme. That time-honoured dignity has passed away, new political combinations have been formed, and new principles prevail. The reconstruction of a great Teutonic empire embracing the whole of Germany is a dream of political pedants. The influence of Germany, which was once so great in Europe, will hereafter be felt rather in an identity of moral sympathies and material interests than in a powerful political organization. Germany may be various, yet united; and any serious danger to a part would speedily combine, for the purpose of resistance, all her people into one. The ordinary balance of power is best maintained by two great States—a Northern and a Southern. Russia thus possesses in Prussia (if Prussia were wisely ruled) a strong bulwark against French aggression; while England, France, and Turkey obtain an effectual security against any dangerous outbreak of Russian ambition in the existence of a great Austrian empire in the south. In the new phase which Austria has now entered she may shine with a truer splendour than she ever possessed before, and will, perhaps, be recognised by future ages as the first great Continental State which reconciled the dignity of monarchy with the energy of freedom, and the power of a vast but composite empire with the liberty and contentment of each of its component parts.

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- ART. II.—1. *Hierophyticon, sive Commentarius in loca Scripturæ Sacræ quæ Plantarum faciunt mentionem*; Auctore Mat. Hillero. Traject. ad Rhenum, 1725. 4to.
2. *Travels or Observations relating to several parts of Barbary and the Levant*. Oxford, 1738; with *Supplement*, &c., 1746. By Thomas Shaw, D.D., F.R.S.
3. *Olavi Celsii Hierobotanicon, sive de Plantis Sacræ Scripturæ dissertationes breves*. 2 vols. 8vo. Amst., 1748.
4. *Physica Sacra, Iconibus æneis illustrata*. J. J. Scheuchzer. Amst., 1752. 5 vols. folio.
5. *Voyages and Travels in the Levant in the years 1747-1752, containing*

- containing *Observations in Natural History, &c., particularly in the Holy Land and the Natural History of the Scriptures.* By the late F. Hasselquist. 1766.
6. *Vermischte Sammlungen aus der Naturkunde zur Erklärung der heiligen Schrift.* Von Samuel Oedman. 1786.
  7. *Descriptiones Plantarum et Animalium, &c., quæ in Itinere Orientali observavit Petrus Forskål.* Hauniæ, 1775.
  8. *Samuelis Bocharti Hierozoicon, sive de Animalibus S. Scripturæ, recensuit suis notis adjectis* E. F. C. Rosenmüller. 3 vols. 4to. Lips. 1793.
  9. Calmet's, Aug., *Great Dictionary of the Bible, with continuation and Scripture illustrated by means of Natural Science in Botany, Natural History, &c.* By C. Taylor. 4to. 4 vols. London, 1797-1803.
  10. Hemprich and Ehrenberg's *Symbolæ Physicæ, seu Icones et Descriptiones Animalium, ex Itinere per Africam borealem et Asiam occidentalem, &c.* Berol. 1828-1831.
  11. *A Dictionary of the Natural History of the Bible.* By Thaddeus M. Harris. London, 1833.
  12. *The Mineralogy and Botany of the Bible.* By E. F. C. Rosenmüller. Translated from the German. Edinb., 1841.
  13. *Palestine: the Physical Geography and Natural History of the Holy Land.* By John Kitto. London, 1841.
  14. *A Scripture Herbal.* By Maria Callcott. London, 1842.
  15. *The Plants of the Bible.* By John H. Balfour, M.A., M.D. 1857.
  16. *Kitto's Cyclopædia of Biblical Literature.* Edited by the Rev. W. Lindsay Alexander, D.D. Parts I.—XIII. Edinb.
  17. *A Dictionary of the Bible, comprising its Antiquities, Biography, Geography, and Natural History.* Edited by William Smith, LL.D. Vol. I. London, 1860.

‘IN one of my botanical lectures in 1747,’ writes Linnæus, in his preface to the posthumous work of his enterprising pupil Hasselquist, ‘I enumerated the countries of which we knew the natural history and those of which we were ignorant. Among the latter was Palestine: with this we were less acquainted than with the remotest parts of India; and although the natural history of this remarkable country was most necessary for divines and writers on the Scriptures, who have used their greatest endeavours to know the animals therein mentioned, yet they could not with any degree of certainty determine which they were before some one had been in the country and informed himself of its natural history.’ Notwithstanding the publication of a few contributions to our knowledge of the natural history

history of Palestine, it must be confessed that the great Swede's lament, uttered more than one hundred years ago, is almost as applicable now as it was then; we are still less acquainted with the natural history of Palestine than with the remotest parts of India. This remark applies, it is true, more especially to its zoology and geology, although much yet remains to be done for the botany of the Holy Land. 'It is perfectly amazing,' a recent traveller in Palestine once remarked to the writer of this article, 'how little we know of the fauna and flora of this country, and how rich and new they are.' As a practical illustration of the truth of this observation, we may notice that our great national Museum contains scarcely any specimens of animals from Palestine; it matters not which department you visit. If you desire to see the fish which swim in the Sea of Galilee, and which in Apostolic times (as now) formed the principal support of the inhabitants of Capernaum and the other villages around the lake, you will be disappointed. There was not a year ago a single specimen of a fish from Palestine in the British Museum. If you visit the entomological department and ask to see specimens of insects, you will generally obtain no other information than that the Museum contains no specimens of any Palestine species. And so we may go on, and obtain the same negative results whatever be the department visited. How is this? How is it that naturalists, who have brought or sent to this country animals from almost every portion of the habitable globe, have done so little for Palestine? Is it because her fauna is poor and little diversified? Certainly not; on the contrary, perhaps there is no country in the world, as Mr. Tristram assures us, whose physical character presents on a small scale an epitome of the natural features of all regions, mountainous and desert, northern and tropical, maritime and inland, pastoral, arable, and volcanic. The bear (*Ursus Syriacus*) of the snowy heights of Lebanon and the gazelle of the desert, the wolf of the north and the leopard of the tropics, are associated together; the buntings, goldfinches, and linnets of our own land occur together with brilliant forms of tropical bird-life, such as the little sun-bird (*Cinnyris osea*) and the beautiful *Amydrus Tristramii*, whose notes of wonderful power and of the richest volume make the very rocks resound. Within a walk of Bethlehem the common frog of England, the chameleon, and the gecko of Africa may be found almost in company, while the *Lepidoptera* of Palestine are as numerous and as varied as might have been expected in a land of flowers.\* Is it because there are few inducements for

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\* 'Dictionary of the Bible,' art. *Palestine, Zoology of.*

the naturalist that we possess so imperfect a knowledge of the fauna of Palestine? We are told (1 Kings iv. 33) that the wisest of men thought it not unworthy of him to speak of its 'trees, from the cedar tree that is in Lebanon even unto the hyssop that springeth out of the wall: he spake also of beasts, and of fowl, and of creeping things, and of fishes.' Our ignorance is chiefly to be ascribed, no doubt, to the unsettled nature of the country, and the difficulty and danger of making investigations and collecting specimens amongst a lawless people; besides which most of the travellers who year by year visit the Holy Land are led thither by associations of a different nature from those which engross the mind of the naturalist; they are absorbed in questions of an historical or topographical character, and really have not time for collecting specimens of natural history during the short period commonly allowed for a tour in the East. Hence many questions, the solution of which would aid us in our attempts to determine the plants and animals mentioned in the Bible, are left undecided. The want of this information was noticed by the late Dr. Kitto, who thus writes:—

'The Natural Histories of the Bible form a class by themselves, having less connexion than any other with the science of nature. They are rather works of criticism than of Natural History—rather the production of philologists than of natural historians. Whatever learning could do on such subjects has been done; and whatever might be done by science, observation, and well directed research has been left undone. The process usually taken in works of this class has been to exhaust the resources of philology and conjecture in the attempt to discover the meaning of the Hebrew name and the object denoted by it. From the very nature of the thing, the conclusion arrived at is often unsatisfactory or uncertain. But a conclusion being taken, the ancient writers of Greece and Rome are ransacked to supply the history and description of the object, and in particular to furnish such intimations as may coincide with or illustrate those of the sacred writers. All this was very proper; but the value of the information thus collected as *contributory* to a Natural History of Palestine might have been very greatly enhanced had corroborations and elucidations been sought in the *actual* condition of the country, and the character of its products in the various departments of nature.' \*

The faulty process complained of by Dr. Kitto was certainly not pursued by the indefatigable Hasselquist, nor by the members of that famous expedition which, at the suggestion of the learned Michaelis, sailed from Copenhagen in 1761 for the purpose of illustrating the Sacred Records. Poor Has-

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\* 'Physical History of Palestine,' p. iv.

selquist, after hearing the lament of Linnæus relative to the defective knowledge of the natural productions of the Holy Land, though in a very delicate state of health, determined to visit the country and investigate its natural history. He accordingly sailed from Stockholm to Smyrna in 1749, and after visiting Egypt and Palestine, and making many valuable notes on the zoology and botany of these countries, he was compelled, on account of the heat of Palestine, to return to Smyrna, where he died in the thirty-first year of his age, 'wasting away daily,' as his great tutor and biographer laments, 'like a lamp whose oil is spent.' The result of Hasselquist's investigations was given to the world by Linnæus in 1757, under the name of '*Iter Palæstinum*;' the volume was translated into English in 1776. Imperfect as this work is, owing to the short time the traveller was in Palestine, it would be difficult to name another more valuable; and it is still *the* book of reference for those interested in the matters of which it treats.

The great Danish expedition of 1761 included Carsten Niebuhr, F. C. von Haven, the naturalist Forskål, C. C. Cramer as physician, and G. W. Baurenfeind as draughtsman. They visited Lower Egypt, Mount Sinai, and Arabia Felix, which last country appears to have been the destined seat of their mission. At Mocha Von Haven the philologist died; soon after Forskål expired; and while the three remaining travellers were on their journey from Mocha to Bombay, the painter Baurenfeind died; and at Bombay it was poor Niebuhr's melancholy duty to bury the last of his fellow travellers, for there the physician Cramer breathed his last. The result of the combined labours of these travellers was published in three separate works, which contain a vast amount of information relative to the countries visited. The natural history portion, containing an account of the plants and animals observed by Forskål, was published at the expense of Niebuhr; and although it contains no direct contributions to the natural history of Palestine, it is still of much value in aiding to determine those productions of Egypt and Arabia of which mention is made in the Bible.

From the great French work on Egypt,\* also, the student of Biblical natural history may derive much assistance, as well as from the '*Natural History of Aleppo*,' by Dr. Russell. But the writers who are most famous for the value of their researches are undoubtedly Samuel Bochart and Olaus Celsius, the former for his systematic treatises on the different animals mentioned in the Bible, the latter for his discussions on the plants.

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\* '*Description de l'Égypte*,' &c.

Bochart was a man of deep learning and most extensive reading; his '*Hierozoicon*,' which was the labour of thirty years, is a complete storehouse of ancient zoology. Quotation follows quotation—'*velut unda supervenit undam*'—from Greek, Latin, and Arabic sources, so that the reader is fairly overwhelmed with the list of authorities quoted, and astounded at the amazing diligence of which the result was the completion of so extraordinary a work. The '*Hierozoicon*' is therefore quite indispensable to him who is investigating the zoology of the Bible; but there can be no doubt that Bochart's conclusions are often unwarranted; he depends too much on etymologies which are sometimes forced and fanciful, besides which, it must be remembered that Bochart was no naturalist. Physical science did not enter into the category of his studies; hence his great work contains much that is mere fable, and his conclusions are often erroneous. What Bochart has done for the zoology of the Bible, Celsius has done for its botany. Dr. Olaus Celsius was Professor of Divinity at Upsal, and is well known to scientific readers as the friend and patron of Linnæus at a time when that great naturalist stood in pressing need of assistance, and the clouds of adversity hung thickly over him. Celsius was at that time preparing his work on the plants of the Bible, in which he was assisted by his young friend. His '*Hierobotanicon*,' which was published at Amsterdam in 1748, is by far the most valuable work that we possess on sacred botany. Celsius was a botanist, he had travelled in the East, and was an accomplished Oriental scholar—a combination of qualifications that could not but result in the production of a work of permanent value. The '*Hierobotanicon*' is an extremely rare book, as there were only two hundred copies printed; and 'it is now one of those works which are oftener talked of than read.'\*

It would be unpardonable were we to pass over without mention the names of Michaelis, Maundrell, Shaw, Harmer, Charles Taylor, Harris, Mariti, Volney, Seetzen, Pococke, Burckhardt, Irby and Mangles, Hemprich and Ehrenberg, Elliott, Kitto, Rosenmüller, Robinson, Royle, Hamilton Smith, Hooker, &c., who have contributed to our knowledge of the Natural History of the Bible, either by suggesting investigations, or by personal observation, or by a careful condensation of existing trustworthy materials. It is, however, from the writings of men who have been long resident in Palestine that we should expect to derive the most information on these subjects. Travellers, as we have observed, have not the necessary time and opportunities at command; but we

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\* Smith in *Linnæan Transactions*, vol. i. p. 34.

naturally anticipate very valuable contributions from residents in the country. We have not been altogether disappointed in the perusal of Dr. W. M. Thomson's work,\* which contains some useful helps to the understanding of certain passages in the Bible which allude to animals and plants. But there is a great fault to be found with Dr. Thomson; he has failed to employ to much advantage the opportunities which a twenty-five years' residence as a missionary in Syria and Palestine afforded him, of increasing our knowledge of these things. He is far too hasty in his conclusions; he often sets at nought the careful investigations of others in the matter of the identity of an animal or plant, and advances his own opinion, which is too frequently unsupported by any kind of evidence. He cares not to know, for instance (p. 256), the botanical name of a certain species of lily which he first saw in the plain of the Huleh; he seems satisfied it is the 'lily of the field' referred to by our Lord, and speaks in raptures of the beauty of the flower, but gives so vague a description as to defy any attempt to divine what is the plant he is talking about.

The importance of Natural History in its bearing on the Bible has long been acknowledged. It is true that it is looked upon with suspicion and forebodings of evil consequences by many persons, but this fact should rather increase our desire for fuller investigation. We look with no degree of anxious suspicion upon attempts to discover the truth, provided those attempts be conducted with honest integrity of purpose, with fair argument, and sound deduction. It is not our intention upon the present occasion to enter into the controversies which are raging upon this subject; our immediate purpose is to bring before our readers a few of the most remarkable animals and plants which the Bible record has invested with more particular importance.

The animals and plants of which mention is made in the Bible belong principally to the countries of Egypt and Palestine, though, of course, we have notices of some that occur in the peninsula of Sinai, as well as of various articles of merchandise consisting of animal and vegetable products from foreign countries.

Of the animals of Egypt, the most remarkable are the crocodile and the hippopotamus; the former being occasionally mentioned under the Hebrew name *liv'yâthan*, the leviathan of the authorised version, while the latter-named animal is denoted by the

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\* 'The Land and the Book,' by W. M. Thomson, D.D., twenty-five years a missionary in Syria and Palestine. London. T. Nelson and Sons. 1860.



Hebrew *behemoth*. The leviathan may denote almost any huge 'monster.' In the 41st chapter of Job it undoubtedly represents the crocodile of the Nile and no other animal, notwithstanding the assertion of Sir G. Wilkinson to the contrary.\* It is perfectly true, as this eminent writer maintains, that 'Isaiah (xxvii. 1) calls "leviathan the piercing serpent," and "that crooked serpent"' where it is probable that it corresponds to the *aphophis*, or great serpent of Egypt; but this by no means invalidates the opinion that *liv'yathan* is a generic term to signify any huge monster, whether terrestrial, amphibious, or marine. Thus, in Psalm civ. 26: 'O Lord, how manifold are Thy works! in wisdom hast Thou made them all: the earth is full of thy riches. So is this great and wide sea, wherein are things creeping innumerable. . . . There go the ships, there is that leviathan whom Thou hast made to play therein,' there can be little doubt that some whale is intended. The word *monster*, therefore, is perhaps as good a translation as can be proposed of the Hebrew term; indeed, the Village Clerk's proposed rendering of 'that great live thing' was not very far from the mark. Great difference of opinion, however, has prevailed amongst the old commentators as to the animal denoted, which is very remarkable, considering the indications which the Bible affords of its identity. 'Canst thou fill his skin with barbed irons? His scales are his pride, shut up together as with a close seal.' 'Who can open the doors of his face?' 'His teeth are terrible round about.' 'The sword of him that layeth at him cannot hold; the spear, the dart, nor the habergeon.' 'He esteemeth iron as straw, and brass as rotten wood.' It is impossible to have a better clue to identification than is conveyed by these expressions. Some of them, indeed, would apply to a large serpent, yet not all equally; besides, it is clear the animal is, for the most part, aquatic in his habits, which python-snakes, as a rule, are not. Many of the oldest commentators were persuaded that a 'whale' is signified. Beza and Diodati appear to have been the first to suggest a crocodile, and Bochart, as Mason Good has well observed, 'has supported this rendering with a train of argument which has nearly overwhelmed all opposition,† and has brought almost every commentator over to his opinion.' Our own translators of the Bible seem to have believed that the leviathan of the book of Job was a whale, as is evident from the marginal reading *whale or whirlpool*, formerly synonymous terms.

\* Note in Rawlinson's 'Herodotus,' ii. p. 99.

† 'The Book of Job literally translated from the original Hebrew,' by John Mason Good, F.R.S. London, 1812.

, Vol. 114.—No. 227.

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Milton

Milton ('Par. L.,' i. 200) represents leviathan as a whale, or some yet greater sea monster, with a scaly skin; for he speaks of

' That sea-beast  
 Leviathan, which God of all his works  
 Created hugest that swim th' ocean stream :  
 Him haply slumb'ring on the Norway foam,  
 The pilot of some small night-founder'd skiff,  
 Deeming some island, oft as seamen tell,  
 With fixed anchor in his *scaly rind*,  
 Moors by his side under the lee—'

Lee, in his 'Commentary on the Book of Job,' has laboured hard to show that leviathan is the common grampus (*Delphinus orca*, Linn.), an opinion which cannot for a moment be maintained, being utterly destitute of any argument to recommend it. Cartwright asserts 'that many of the ancients both by behemoth and by leviathan understand the devil.' Mercer says 'Nostri collegerunt, hanc descriptionem Leviathanis ad Satanam pertinere;' and again—'Multa in Leviathanis descriptione nulli alii quam Diabolo, aut saltem non adeo proprie congruunt' (!). What these descriptive details are, which are so especially applicable to the devil, it would be difficult to determine. There are, however, modern critics who seem to be of the same opinion; for, who does not remember the indignant remonstrances which were uttered some years ago by a certain Journal, when it was proposed to call the monster-ship by the dreadful name of 'Leviathan?' The argument against the name was groundless. There is not the slightest indication in Scripture that leviathan ever designated Satan. The 'leviathan, the piercing serpent, even that crooked serpent' clearly refers to some temporal enemy of the Jews; in all probability the Egyptian Kingdom, of which some huge rock-snake or python was an emblem. But even if the term were ever applied in the sense which has been attributed to it, it would be as reasonable to object to many other names given to ships—such as: 'The Lion,' 'The Serpent,' 'The Dragon,' &c. The crocodile was regarded by the Israelites as an emblem of the Egyptian King: 'Thou didst divide the sea by Thy strength . . . Thou brakest the head of leviathan in pieces, and gavest him to be meat to the people inhabiting the wilderness'—that is, Thou didst destroy the princes of Pharaoh, and didst give their dead bodies to the jackals of the desert of Sinai. The jackals, which are pre-eminently the 'wild beasts of the field,' are doubtless intended by the expression 'people inhabiting the wilderness;' just as in Prov. xxx. 25, 26, it is said that 'the ants are a *people* not strong;

strong; the conies are but a feeble folk.' It was very natural that the oppressed Israelites should compare their great enemy with the terrible crocodile; and so in Ezekiel (xxix. 3) Pharaoh, King of Egypt, is called 'the great dragon that lieth in the midst of his rivers.'

The question as to the animal denoted by the *behemoth* of the Book of Job has been as much discussed as the former word. Some critics have suggested the *elephant*; others, as Mason Good, have thought that the behemoth was some extinct mastodon or mammoth. (!) There can be no doubt, however, that the hippopotamus is the behemoth of Scripture. The expressions, 'he eateth grass as an ox'—'he lieth under the shady trees in the covert of the reeds and fens'—'he moveth his tail like a cedar'—clearly point to the hippopotamus. Though he passes much of his time in the water, yet he takes not his food from thence, like his associate the crocodile; he eats grass like cattle; the hill-sides bring him forth food. Again, according to the opinion of many Oriental scholars, as Bochart, Gesenius, Fürst, Jablonski, and others, the Hebrew *behemoth* is equivalent to the Coptic *pehemou* or *pehemout*, i. e. *Bos marinus*. But let the reader peruse the whole passage of Job xl. (15-24) and say whether every particular does not suit the hippopotamus?

'The Talmudists represent behemoth as a huge land-quadruped which each day devours the grass of a thousand hills; hence he is called the "bull of the high mountains." He is at some future period to have a battle with leviathan.' 'The Fathers for the most part,' as Carey observes, 'surrounded the subject with an awe equally dreadful; and in the behemoth and the leviathan saw nothing but mystical representations of the devil, . . . but these wild imaginations are surpassed by that of Bolducius, who in the behemoth actually beholds Christ.'\*

There is abundant evidence to show that the hippopotamus formerly existed in other regions than those to which it is now confined; it has entirely disappeared from Lower Egypt, but in 1600 it was found in the Delta of the Nile, for the traveller Zereughi killed two individuals near Damietta. Bones of the modern species (*H. amphibius*, Lin.) have been found in the river Chelif in Algeria. There can be no doubt that the hippopotami which were introduced into the Roman shows were derived from Lower Egypt and North Africa; and doubtless the behemoth of the Book of Job refers to an animal of the same locality.

But if the behemoth and the leviathan have each of them

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\* 'Dictionary of the Bible,' art. *Behemoth*, App. A.

received a very large share of discussion, perhaps both are surpassed in this respect by the claims of the unicorn. Pages upon pages have been written on this subject. Some have said it must have been the antelope (*Oryx leucoryx*) of North Africa, Syria, &c., that the horns seen in profile appear as one, and hence the mistake of regarding the animal as possessing a single horn; others have no hesitation in referring the unicorn to the one-horned rhinoceros (*R. unicornis*) of Asia. This is the opinion generally entertained at this day.\* But all attempts to discover a one-horned animal that shall represent the unicorn of our English Bible are beyond the mark entirely, and for this simple reason, the so-called unicorn is no unicorn at all: the Hebrew word *r'ém* denotes a two-horned animal beyond a shadow of doubt. The 'unicorn' of our authorised version owes its origin to the *μονοκέρας* of the LXX. That the *r'ém* possessed two horns is evident, as observed by Schultens in 1737, from the 17th verse of Deut. xxxii., where of Joseph it is said, 'His horns are like the horns of a *r'ém*.' Our translators, seeing the contradiction involved in the expression 'horns of the unicorn,' have rendered the Hebrew singular noun as if it were a plural form. In the margin, however, they give the correct translation. The two horns of the *r'ém* are the ten thousands of Ephraim and the thousands of Manasseh, and represent the two tribes which sprang from one (viz. Joseph), just as two horns spring from one head. We may dismiss the idea, therefore, that a unicorn is spoken of anywhere in the Bible. The *r'ém* is a two-horned animal, and almost certainly denotes some kind of 'wild ox,' as appears from a comparison of the different passages where the word occurs in Holy Scripture. The *r'ém* is almost always mentioned with bovine animals: it is said to push with its horns: it must have been frequently seen by the ancient Hebrews roaming on the hills of Palestine and in the woods of the Jordan valley, as is evident from the numerous allusions to it. It is true there is no 'wild ox' at present known to exist in Palestine, but this is no reason why in early times some mighty species, allied perhaps to the *urus* of the Hercynian Forest, of which Cæsar speaks, should not have existed in that country. Lions were certainly not uncommon in Palestine and Syria in Biblical times, as is clear from the numerous allusions to them in Holy Writ; and it is interesting to note, in verification of the Scriptures, that the late Dr. Roth discovered bones of the lion in gravel on the banks of the Jordan, near the Sea of Galilee. It is, therefore, quite probable that future investigations

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\* See 'Annals and Magazine of Natural History,' No. lix., Nov. 1862.

in Palestine may result in the discovery of the bones of *Bos primigenius*, or *Bison priscus*, or some other species of once formidable ox. Our readers will remember the beautiful passage about the *r'ém* in the Book of Job. Now, let us compare with it the account Cæsar gives of the fierce *urus*, which in his time was to be seen in the great Hercynian Forest:—

‘These uri are scarcely less than elephants in size, but in their nature, colour, and form are bulls. Great is their strength, and great their speed; they spare neither man nor beast when once they have caught sight of them. The hunters are most careful to kill those which they take in pitfalls, while the young men exercise themselves by this sort of hunting and grow hardened by the toil; those who kill most receive great praise when they exhibit in public the horns as trophies of their success. These uri, however, even when young cannot be habituated to man or made tractable.\* The size and shape of their horns are very different from those of our oxen.’—*Bell. Gal.*, iv. 29.

The indomitable nature ascribed to these wild uri exactly agrees with the description of the *r'ém*, as given in the 39th chapter of Job, ‘Will the *r'ém* be willing to serve thee, or abide by thy crib?’ and the implied contrast between the domestic ox and the intractable *r'ém* finds an analogue in the above extract from Cæsar.

But of all the animals of which mention is made in the Bible, the greatest stumbling-block to critics is found in the fish that swallowed Jonah. It is generally supposed that no animal exists with a gullet sufficiently wide to allow of the passage of a man to the stomach. This, however, is an error. The white shark, that terrible foe to sailors, is quite able to swallow a man whole. A well-known ichthyologist thus speaks of this shark’s capabilities in this respect. White sharks

‘usually cut asunder any object of considerable size and thus swallow it; but if they find a difficulty in doing this, there is no hesitation in passing into the stomach even what is of enormous bulk; and the formation of the jaws and throat renders this a matter of but little difficulty. Ruysch says that the whole body of a man in armour (loricatus) has been found in the stomach of a white shark; and Captain King, in his “Survey of Australia,” says he had caught one which could have swallowed a man with the greatest ease. Blumenbach says a whole horse has been found in it; and Captain Basil Hall

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\* It appears, however, that the ancient lake-dwellers of Switzerland did succeed in taming the *urus*, towards the close of the stone and the beginning of the bronze period. ‘In a tame state its bones were somewhat less massive and heavy, and its horns were somewhat smaller than in wild individuals. Still in its domesticated form it rivalled in dimensions the largest living cattle, those of Friesland in North Holland, for example.’—Lyell’s ‘Antiquity of Man,’ p. 24.

reports the taking of one, in which besides other things he found the whole skin of a buffalo, which a short time before had been thrown overboard from his ship.\*

It is true that in the New Testament the fish is called a 'whale;' but the Greek *κῆτος* is not to be restricted to such a meaning: it is used in classical authors in a wide sense to denote either a 'seal,' or a 'tunny,' or a 'whale;' in fact, almost any large marine monster. But even if it were necessary to suppose some *Cetacean* was signified, there is, so far as ability to swallow is involved in the question, nothing opposed to zoological fact. The spermaceti whale (*Catodon macrocephalus*) has a very capacious throat, quite wide enough to admit the body of a man: it might occasionally find its way from the Northern Seas into the Mediterranean—the scene, doubtless, of the transaction recorded in the Book of Jonah—but the ordinary food of whales consists of comparatively small animals, *Crustacea*, *Medusæ*, &c. Dr. Harris observes, 'that the fame of the prophet's miraculous preservation was so widely propagated as to reach even Greece; whence was, no doubt, derived the story of Hercules escaping alive out of a fish's belly, alluded to by Lycophron.' How a man could be preserved alive until the third day in the belly of a whale or a shark, is quite another matter; nor is the solution of the question to be sought for in the field of physical science. Jonah's preservation, if the account is to be understood literally, was unquestionably miraculous.

In no Book in the Bible are so many and such full descriptions of animals as in the Book of Job. The whole of the 39th chapter consists of beautiful pictures, drawn from nature—the allusions to the habits of wild asses, for instance:—

'Who hath sent out the wild ass free? or who hath loosed the bands of the wild ass?

'Whose house I have made the wilderness, and the salt places his dwellings.

'He scorneth the multitude of the city, neither regardeth the crying of the driver.

'The range of the mountains is his pasture, and he searcheth after every green thing.'

The species here referred to is probably the *Asinus hemippus*, which inhabits the deserts of Syria, Mesopotamia, and the northern parts of Arabia. Mr. Layard, as he was riding through the desert to Tel Afer, saw a troop of these wild asses, which at first he mistook for a body of horse, with the Bedouin riders concealed. 'The reader will remember,' he adds, 'that Xenophon mentions

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\* 'Fishes of the British Islands,' vol. i. p. 27: Jonathan Couch, London, 1862.  
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these beautiful animals, which he must have seen during his march over these very plains. The country,' says he, 'was a plain throughout, as even as the sea, and full of wormwood. . . . The asses, when they were pursued, having gained ground on the horses, stood still (for they exceeded them much in speed), and when these came up with them, they did the same thing again. The flesh of those that were taken was like red deer, but more tender' (Strabo, i. § 5). 'In fleetness,' continues Mr. Layard, 'they equal the gazelle, and to overtake them is a feat which only one or two of the most celebrated mares have been known to accomplish.' The *Asinus vulgaris* of North-East Africa, and perhaps also the *A. onager*, or koulán, of Persia and West India, were probably known to, though not discriminated by, the ancient Hebrews.

It is beyond question that the Biblical notices of animals are not always in strict harmony with zoological facts; we give as an illustration of the truth of this remark the following quotation from the Book of Job (xxxix. 13-18), from which it will be seen that the ancient Orientals regarded the ostrich as a stupid bird, and without natural affection for her young. The passage may be translated thus:—

'The wing of the ostrich moving joyously; \* is it indeed a pious pinion and feather?

'She leaveth her eggs to the earth and warmeth them upon the dust,

'And forgetteth that a foot may crush them, and that the beast of the field may trample on them.

'She is hardened against her young ones, as though they were not her own; in vain she labours without solicitude.

'For God hath made her forget wisdom and hath imparted unto her no share of understanding.

'What time she raiseth herself on high, she scorneth the horse and his rider.'

Now, so far from the ostrich being devoid of natural affection towards her brood, she is remarkable for quite the opposite character. It is not an uncommon thing, for instance, to discover a dead fox or jackal, or other small carnivorous enemy, close to the ostrich's nest, the hungry marauder having been killed by the kicks of the male bird. Again, the eggs which a 'foot may crush' are an additional evidence of the bird's provident care for her young. They are not the eggs destined for hatching—for these

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\* Gesenius aptly compares the idea conveyed by the Hebrew verb with that expressed by the ἀγαλλόμεναι πτερυγέσσει of Homer (*Il.* ii. 462). Shaw, speaking of the 'actions and behaviour' of ostriches, says (*Suppl.*, p. 71), 'They would be perpetually fanning and priding themselves with their quivering-expanded wings.'

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are covered, when the birds are not incubating, a foot or more deep in the sand, and in consequence are safe from injury—but they are supernumerary eggs, which the mothers lay from time to time during the period of incubation, and are intended as food for the young when hatched; they lie carelessly about, to all appearance forsaken, and are doubtless the ‘eggs which a foot may crush,’ referred to in the Biblical account. It is a mistake to suppose that ostriches do not incubate. It is true that in the tropics the parent birds leave the sun to do the work of incubation for a great part of the day, but during the night the birds always protect and sit upon their eggs. The ostriches, with which the Jews would have been familiar, were natives of Egypt, Syria, and North Africa, nor is it likely they were acquainted with tropical birds.

Is the ostrich really without understanding? It would be difficult to reconcile the Biblical statement, were it received as an infallible enunciation, with the indisputable truth patent to every student of nature that all that God has made is ‘very good.’ The ostrich is remarkably cunning: ‘So wary is this bird,’ says Mr. Tristram, who has paid particular attention to its habits, ‘and so open are the vast plains over which it roams, that no ambuscades or artifices can be employed, and the vulgar resource of dogged perseverance is the only mode of pursuit.’\* But it is enough to know that the Orientals attributed foolishness to the ostrich; indeed, they have a proverb, ‘stupid as an ostrich,’ and Bochart has given us five different points on which this bird is supposed to deserve its character:—(1) Because it will swallow stones, iron, &c. &c.; (2) Because, when it is hunted, it thrusts its head into a bush, and imagines the hunters do not see it,—an old conceit, properly ridiculed by Diodorus Siculus; (3) Because it allows itself to be captured in the manner described by Strabo; (4) Because it neglects its eggs; (5) Because it has a large head and few brains.†

We are well aware of what Jackson and Shaw have recorded with regard to the want of *στοργή* in the ostrich. But that the Arabs occasionally find forsaken eggs and ‘little ones no bigger than well-grown pullets, half-starved, straggling and moaning about like so many distressed orphans for their mother,’ no more proves the want of natural affection in this bird, than occasional forsaken nests prove the same thing with regard to almost every species of wild bird, for all of them on disturbance are apt to forsake their eggs or young ones. A modern traveller in South-

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\* ‘The Great Sahara,’ p. 117.

† ‘Dictionary of the Bible,’ art. *Ostrich*.



West Africa, Mr. C. J. Andersson, bears the following testimony to the parental care displayed by the ostrich :—‘ When on the road between the bay and Scheppmansdorf we discovered a male and female ostrich, with a brood of young ones about the size of ordinary barn-door fowls. . . . Accordingly we dismounted and gave chase; and the moment the parent birds became aware of our intention they set off at full speed, the female leading the way, the young following in her wake, and the cock, though at some little distance, bringing up the rear of the family party. *It was very touching to observe the anxiety the old birds evinced for the safety of their young.* Finding that we were quickly gaining upon them, the male at once slackened his pace and diverged somewhat from his course; but seeing that we were not to be diverted from our purpose (the travellers wished to procure some craniums of the young birds for Professor Owen), he again increased his speed, and with wings drooping so as almost to touch the ground, he hovered round us, now in wide circles, and then decreasing the circumference till he came almost within pistol-shot, when he threw himself abruptly on the ground, and struggled desperately to regain his legs, as it appeared, like a bird that has been badly wounded. Having previously fired at him, I really thought he was disabled, and made quickly towards him; but this was only a *ruse* on his part, for on my nearer approach he slowly arose and began to run in an opposite direction to that of the female, who by this time was considerably ahead of her charge.’ After an hour’s chase the travellers secured nine young ones out of the brood, which consisted of about double that number.

With regard to the power of ruminating which is ascribed to the coney and the hare, it is clear that no real power of the kind belongs to those animals. The coney, the *shâphan* of the Hebrew Bible, is, we conceive, the Syrian hyrax (*Hyrax Syriacus*), a small animal about the size of a rabbit, which in some of its habits it much resembles. There are three or four specimens of the Cape hyrax (*H. capensis*) at present in the collection of animals in the Regent’s Park Zoological Gardens. The Syrian species is apparently becoming very scarce; its locality is confined to the sterile and rocky hills of the Jordan and Dead Sea valleys. Bruce kept a tame hyrax in confinement, and from a peculiar twitching motion of the animal’s mouth was led into the error of supposing it chewed the cud.\* The same peculiar

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\* Sir G. Wilkinson (‘Ancient Egypt,’ vol. i. p. 228 : London, 1854), however, speaking of the hyrax, says, ‘It was probably the *saphan* of the Bible, as Bruce has remarked, and that enterprising traveller is perfectly correct in placing it among

peculiar twitching many must have observed in the case of hares and rabbits; hence the poet Cowper, speaking of one of his tame hares, says 'it chewed the cud till evening.' Groups of this active little hyrax may be seen to congregate amongst the rocks, in the cavities of which they hide themselves when alarmed. 'The high hills are a refuge for the wild goats; so are the stony rocks for the conies.' Solomon mentions the hyrax as one of the four things upon earth which, though little, 'are exceedingly wise.' The wisdom here ascribed to it probably alludes to its shyness and wariness, which render it difficult to approach; though it may have more particular reference to the cunning displayed by old males, which, according to some observers, keep watch as sentries in the vicinity of their holes, and utter a sound like a whistle to apprise their companions when danger threatens.

Strange as it may appear, the little hyrax, although in some respects it resembles the *Rodentia*, has its true affinities with the rhinoceros; its molar teeth differ only in size from those of that great *Pachyderm*. The Arabs of Mount Sinai eat the flesh of the hyrax and esteem it a delicacy; it is said to resemble the flavour of a rabbit. It was forbidden as food by the Mosaic law, which allowed only of quadrupeds such of the *Ruminantia* as fully divided the hoof.\* The hare, therefore, of which two species, *Lepus Syriacus* and *L. Sinaticus*, are mentioned by Ehrenberg and Hemprich as occurring, the former in the Lebanon, the latter in the peninsula of Sinai, was, together with the *sháphan*, excluded from the list of 'clean beasts.' The following is Russell's description of hare-hunting in Syria:—

'At present the gentlemen course with native greyhounds, assisted by a hawk of the same kind with that employed for antelopes. The company, consisting of twenty or thirty horsemen, servants included, draw up in a line at the distance of six or eight feet. Near each end of the line which is termed the Barabar, two brace of greyhounds are led by footmen and advanced a little before the centre, the falconer

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among ruminating animals.' Being aware that Prof. Owen had observed a *quasi*-rumination in some of the kangaroos, we wrote to that eminent naturalist to inquire whether the same thing had ever been noticed in any individual of the *Hyracidae*, and received the following reply:—'The stomach of the hyrax is a simple bag, as in the horse and rhinoceros, with a partial lining of cuticle, as in them. It has not the valvular construction of the entry, as in the horse, and therefore regurgitation is possible. Man, with a similar simple stomach, occasionally ruminates, and this rare abnormal act may occur in a hyrax; but it has not the ruminating organization, nor have the individuals in captivity at the Zoological Gardens been observed to ruminate.' Even if some hyrax should ever be observed to chew the cud, the general question will not be affected thereby; *normally* the hyrax is no more a ruminating animal than man.

\* The camel, therefore, as only *partially* dividing the hoof, was accounted amongst the 'unclean' beasts.

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rides. It should be remarked that the dog-leaders are surprisingly adroit in finding a hare, and are encouraged by a reward, if they give proper notice, which is done by calling out deliberately *Yatoo!* (she sleeps!). In this order the *Barabar* marches slowly, and as soon as the hare is put up, one or a brace of the nearest hounds is slipped, and the falconer galloping after them, throws off his hawk. Such of the company as choose follow; the others remain standing in the *Barabar*, to which the sportsmen return when the chase is over. The hare cannot run long when the hawk behaves properly, but sometimes getting the start of the dogs she gains the next hill and escapes. It now and then happens, when the hawk is fierce and voracious in an unusual degree, that the hare is struck dead at the first stroke, but that is very uncommon; for the hawks preferred for hare-hunting are taught to pounce and buffet the game, not to seize it, and they rise a little between each attack, to descend again with fresh force. In this manner the game is confused and retarded till the greyhounds come in.'

The modern Orientals hunt gazelles, partridges, sand-grouse, quails, herons, bustards, &c., by means of falcons; sometimes, as in the case of antelopes and hares, assisted by greyhounds. There is, however, no evidence to show that the ancient Orientals pursued falconry. 'The partridge hunted on the mountains,' to which David compares himself, alludes probably to the method of taking these birds by throw-sticks. The modes generally adopted in Biblical times for taking wild animals were by nets and pitfalls. Dogs do not appear to have been employed at all in the chase, and are almost always spoken of in terms of reproach. House-dogs were kept by the ancient Hebrews. 'His watchmen are blind, they are all ignorant; they are all dumb dogs, they cannot bark;' and shepherd-dogs were used for guarding the flocks. Job complains that his juniors 'have him in derision, whose fathers he would have disdained to set with the dogs of his flock.' A sorry race they doubtless were, and the breed does not seem to have improved. 'They are a mean, sinister, ill-conditioned generation,' says Dr. Thomson, 'kept at a distance, kicked about, and half-starved, with nothing noble or attractive about them.' Poor brutes! it would have been a wonder had they been otherwise.

Speaking of hares, Russell states that neither the Turks nor other natives are fond of the flesh; but the Arabs eat it;—that the Armenian Christians, from a religious scruple, abstain from it. Aversion to hare's flesh is not confined to the Orientals: to this day the Laplanders and some other Europeans regard it with horror. Formerly this aversion prevailed to a much greater extent than it does now, for the ancient Britons were not allowed by their religion to eat either hare, fowls, or geese, at least so  
says

says Cæsar.\* It is very curious to remark that neither in the Danish *Kitchen-Middins* nor in the Swiss *Pfahlbauten* or Lake habitations, have any remains of the hare been discovered, with the exception of a single bone at Moosseedorf.†

Of the *Carnivora*, express mention is frequently made in the Bible of the lion, the bear, the hyæna, the wolf, the leopard, the fox, and the jackal. All these animals, with the exception of the king of beasts, which has entirely disappeared from Palestine, are occasionally to be seen there now, though not in anything like the numbers which prevailed in Biblical times. That the lion, which was probably the Persian variety, formerly existed in considerable numbers in Palestine is evident from the frequent Bible allusions. According to Rabbinical writers, seven names at least are assigned to this animal at different periods of its life. In ancient times the lion inhabited some parts of Egypt; but it has long since ceased to exist there. Lebaoth, Beth-Lebaoth, and Laish probably derived their names from the lions which frequented these places. In the 'forests' and 'thickets,' and 'caves of the mountains,' and in the brushwood of the Jordan banks, they had their lairs: this last was their favourite haunt; and if we do not over-interpret the words of Joannes Phocas,‡ who travelled in Palestine about the end of the twelfth century, it would seem that lions were in his time occasionally seen there. The lion is represented as spoiling villages and towns, devouring men, and attacking flocks. Amos draws a very graphic picture of the 'shepherd taking out of the mouth of the lion two legs or a piece of an ear.' Harmer very ingeniously and with much probability supposes that this 'piece of the ear' was a portion of the long pendulous ear of the Syrian goat, which is common in Palestine at this day. The Persian lion has not the courage of his African relative. According to Olivier,§ he has recourse rather to cunning than to force in the capture of his prey. He dares not attack the boar, and flies as soon as he perceives either a man or a woman, or even a child; if he catches a sheep, he makes off with his prey, but he abandons it to save himself when an Arab runs after him. If this is his true character, it may serve to help us more easily

\* 'Leporem et gallinam et anserem gustare fas non putant: hæc tamen alunt animi voluptatisque causâ.' ('Cæsar,' B. G. v. 12.) Did not the ancient Britons eat eggs?

† See the interesting paper by Mr. Lubbock on the Lake Habitations of Switzerland in 'The Natural History Review' for January, 1862.

‡ Speaking of the reedy coverts on the Jordan banks, Phocas says, *ἐν τοῖς λεόντων φύλα ἔωθας κατοικεῖν*.—(Reland, 'Palest.,' vol. i. p. 294); see also Smith's 'Dictionary of the Bible,' art. *Lion*.

§ 'Egyptian Sepulchres and Syrian Shrines,' vol. ii. p. 58.

to understand those Scriptural passages which record instances of shepherds attacking lions single-handed.

The bear that destroyed the forty-and-two children that mocked Elisha was, no doubt, the *Ursus Syriacus*, the Palestine representative of the *U. arctos* of North Europe; it was noticed by Hemprich and Ehrenberg, on the Macmel, one of the summits of Lebanon; and, according to Dr. Thomson, it is still found on the high mountains of that part of the country. The hyæna and wolf are also still found in Palestine, while foxes and jackals are common everywhere. We may here remark in passing that the 300 foxes that Samson is said to have caught were no doubt jackals. The Hebrew *shûal* is the Persian *shaghal*, the German *schagal*, and our English *jackal*. Critics have advanced many objections to this transaction of the Hebrew Judge. Part of the difficulty, however, vanishes if we suppose that jackals are intended; for these animals, which for the most part are gregarious in their habits, might readily have been captured in nets or pitfalls in great numbers; and there is no necessity for concluding that Samson did all the hunting himself, and had no helpers. With respect to the other difficulty, that two animals united by their tails, instead of running off, would stand still and fight most fiercely, it must be remembered that we are not told the length of the cord that united the animals—a very important consideration—for a cord of merely a couple of yards long might have answered the required purpose; jackals being, as was said, gregarious in their habits, we can easily believe that couples thus united would run together, and make the best of their way out of the sight of their captors.

Boars and leopards are still found in some parts of Palestine. Mount Tabor is a favourite haunt of wild boars, and Pococke observed herds of these animals near the Jordan, where it flows out of the Lake of Tiberias. The havoc which wild boars do to vineyards is well known, and is especially referred to in the Bible. Miss E. A. Beaufort relates in her charming work, 'Egyptian Sepulchres and Syrian Shrines' (vol. ii. p. 59), a curious anecdote of a panther, which formed an attachment to a Russian hermit that a few years ago lived on the top of Mount Tabor. 'One winter's day a noble panther approached the cave in which he lived; he threw him a piece of bread, and the panther crouched down at his feet. He soon became quite tame, and thenceforth, wherever the hermit went, the beautiful creature was at his side following him like a dog. Mr. Rogers, the English Consul at Haiffa, who told me this story, frequently saw them together on the mountain.' It is impossible to read this anecdote without calling  
to

to mind the well-known story of Androclus and the Lion, living together in a cave, as told by Aulus Gellius.\*

The ornithology of Palestine is very varied, and the Bible contains several allusions to birds. The migratory habits of some species are especially noticed. 'The stork in the heavens knoweth her appointed times, and the turtle, and the crane, and the swallow observe the time of their coming.' 'Doth the hawk fly by thy wisdom, and stretch her wings towards the South?' In this country the smaller species of *Raptors* are resident the whole year; but in Palestine nearly all are summer migrants. The singing of birds and the soft murmuring of the turtle-dove were indications that 'the winter was past, the rain over and gone,' and that the warm spring had commenced. Palestine is rich in song-birds. The black-bird and thrush of England mingle their melodious notes with those of the nightingale of the country (*Ixos xanthopygus*), the finest songster in Palestine, which pours forth its song long before sunrise, and continues its concert with its fellows till nearly noon.† Various kinds of pigeons (*Columbidæ*) may be seen; the *Turtur auritus* frequents the orange-groves round Jaffa; and the *Turtur Ægyptiacus* is common near Jericho. Partridges, francolins, quails, and sand-grouse are abundant.

Much has been written on the subject of the 'quails' which fed the wandering Israelites in the wilderness, but we think that the common quail is denoted by the Hebrew term *Selâv*. Ludolf would have that they were locusts, and has written a work in support of his theory.‡ He has been followed by Patrick. Rudbeck § said the *selâv* were flying-fish (*Exocetus*). Ehrenberg was of the same opinion, substituting, however, the genus *Trigla* for *Exocetus*. Mr. Forster has advanced an opinion that red geese, of the genus *Casarca*, are the birds intended. Sir E. Tennent is inclined to adopt this explanation. Several Biblical commentators, as Rosenmüller and Gesenius, refer the *selâv* to a species of sand-grouse (*Pterocles alchata*) common in the Bible lands. The bird last named has some slight claims, but not equal

\* Nor is it easy to write Mr. Rogers's name and designation without being reminded of his sister's truly interesting 'Domestic Life in Palestine.'

† Ibis, vol. i. p. 30.

‡ 'Dissertatio de Locustis, cum Diatriba, qua sententia autoris nova de שָׁלָו Selavis, sive locustis, cibo Israëlitarum in deserto defenditur,' &c. Fran. ad Moen. 1694.

§ 'Ichthyologiæ Biblicæ, Pars I., de Ave Selav, cujus sit mentio Numb. xi. 31, in quâ contra Bochartum et Ludolfum non Avem plumosam nec Locustam fuisse, sed potius Piscis genus, demonstratur.' Ups., 1705.

claims with the common quail, to represent the *selâv* of the Scriptures. The explanation of *selâv* by 'wild-geese,' or 'cranes,' is purely gratuitous. Mr. Forster's *casarca* is the *C. rutila*, a bird about the size of a mallard, which can by no means answer the supposed requisite of being two and a half cubits high. Professor Stanley's 'large red-legged cranes' are evidently white storks (*Ciconia alba*), and would suit as to height, but certainly not as to flavour. Had the learned Professor of Ecclesiastical History only tried to swallow a mouthful of stork's flesh, he would have been convinced that the Israelites would never have eaten it for a day, much less for a month! The Hebrew *selâv* is the same as the Arabic *salwâ*, which, according to Schultens, is from an Arabic root signifying 'to be fat;' the round, plump form of the quail suits this derivation admirably. Quails (*Coturnix dactylosomans*) migrate in immense numbers; as many as 100,000 have been taken near Nethuno in one day. They fly in the evening or at night; they are so exhausted after flight that they are barely able to rise a few feet from the ground, and are in consequence readily captured. 'Clouds of quails,' says Shaw,\* 'alight in spring along the coasts of Provence; here they are sometimes found so exhausted that for a few of the first days they may be caught with the hand.' 'And there went forth a wind from the Lord and brought quails from the sea, and let them fall by the camp, as it were a day's journey on this side, and as it were a day's journey on the other side round about the camp, and as it were two cubits high upon the face of the earth.' This latter expression is explained by the Septuagint, Vulgate, and Josephus to refer to the height at which the quails flew above the ground in their 'exhausted condition' as just mentioned.

Of the class *Reptilia* different sorts of lizards are mentioned in the Bible, but only in the list of unclean animals. We need not stop to notice them; the crocodile has been already considered. Different kinds of serpents are frequently alluded to. The 'deaf adder that stoppeth her ears' is probably the Egyptian *Cobra* (*Naja haje*), one of the most general subjects of the charmer's art; 'the adder (Hebrew *shephîphôn*) in the path that biteth the horse's heels' is the *Cerastes Hasselquistii*, or horned viper of North Africa and Arabia. It is impossible to say what 'the fiery serpents' that destroyed the murmuring Israelites denote, but as the venomous serpents that are found in the Peninsula of Sinai are few in species, perhaps some *Cobra* may be intended. The 'fiery flying serpent' of Isaiah (xiv. 29) could never have had any existence in nature. Professor Stanley, in his sermon on

\* 'Zoology,' xi. 362 (1819).

'Human Corruption,' speaking of the serpent of the Fall, eloquently observes :—'We might show how in the natural history of the actual serpent there meet together those outward characteristics which give a special significance to its selection as the symbol of evil; how the towering pride of its crested head, and the beauty of its glittering skin, the subtle fascination in the fixed and steadfast gaze of its unshaded eye, the wily cunning of its tortuous movements, the malignant venom of its poison, the undisguised shamelessness of its natural lust, the low and grovelling descent into the dust of the earth—are indeed fit emblems of almost every form of the darker side of human life.' Of the *Batrachia* we have Biblical notice only of the frog (*Rana esculenta*), in the matter of the Egyptian plague.

Fish are mentioned only in the aggregate; there is no allusion to any particular kinds, and little is known about the fish of the Jordan and Lake of Tiberias. The fish of the Sea of Galilee have long been famous for their excellent quality; the *mesht* (*Sparus Galilæus*) and the *binny* (*Barbus binni*, Cuv.) appear to be almost the only ascertained species known to occur in this lake. All travellers are agreed as to the total absence of organic life in the waters of the Dead Sea. 'It would, however, be interesting to determine whether some species of *Artemia* (brine shrimp) may not be found in the shallow pools at the extreme south end of the lake. The *Artemia salina* is, as far as is yet known, the only animal capable of living in a concentrated solution of salt. In the open tanks at Lymington myriads of these transparent little shrimps, which are about half an inch in length, may be seen swimming actively about in water every pint of which contains as much as a quarter of a pound of salt.'\*

The only direct allusion to any of the *Mollusca* occurs in Psalm lviii. 8; the Hebrew word translated 'snail' in Leviticus xi. 30 probably denotes some species of lizard. The expression in the Psalm 'let them consume away like a snail' refers to an erroneous notion that the snail, by leaving its slimy track behind it, actually wasted away.

Pearls are the subject of several allusions. They were, no doubt, yielded for the most part by the *Avicula margaritifera*, or pearl-oyster, and were obtained from the Persian Gulf, which has long been celebrated for the excellence of its pearls.

Of insects, the ant and locust are particularly mentioned. 'The ants are a people not strong, yet they prepare their meat in the summer.' Solomon very properly enumerates ants amongst the four things which, though little upon the earth, 'are ex-

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\* 'Dictionary of the Bible,' art. *Palestine, Zoology of*.



ceeding wise.' According to the attentive observation of entomologists, ants do not prepare their meat in the summer for winter's consumption; at least, it is pretty certain that in a country like Palestine, where the cold of winter is severe, these insects lie dormant. It is true that Colonel Sykes has a paper (vol. ii. 'Transac. of Entomol. Society,' p. 103) on a species of Indian ant, which he calls *Atta providens*, from the fact of his having found a large store of grass-seeds in its nest; but that gentleman's observations merely show that this ant carries seeds underground, and brings them again to the surface, apparently to dry, after they have got wet during the monsoons.\* The processionary ant of Brazil (*Oecodoma cephalotes*) carries immense quantities of portions of leaves into its underground nest. Some people have supposed that these leaves were for food, but Mr. Bates, who has paid a good deal of attention to the subject, convinced himself that the leaves were taken for the purpose of lining the channels of the nest, and not for food. Ants will also carry away grains of corn. 'They are great robbers,' says Dr. Thomson, 'and plunder by night as well as by day, and the farmer must keep a sharp eye to his floor, or they will abstract a large quantity of grain in a single night.' ('The Land and the Book,' p. 337.) It was natural to conclude that these busy little animals, which are perpetually running away with something or other in their mouths, were intent on laying up store for future use. The ancient Greeks and Romans were under this impression. It will be enough to quote the well-known lines of Horace:—

'Parvula (nam exemplo est) magni formica laboris  
Ore trahit quodcunque potest, atque addit acervo  
Quem struit, haud ignara ac non incauta futuri.'

The Arabians held the wisdom of the ant in such estimation that they used to place one of these insects in the hand of a newly-born infant, repeating these words, 'May the boy turn out clever and skilful.'

We often read of locusts, the most injurious insect that exists. About ten different Hebrew names occur, which Bochart argues denote so many species. This is certainly an error: the destructive locusts with which the inhabitants of the Bible lands were acquainted are limited to two or three species; such as the *Edipoda migratoria* and the *Acridium peregrinum*; some of the Hebrew names may be synonyms, others may indicate the larval or nymphal conditions of these two pre-eminent devourers of every green thing. The following are the Biblical

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\* 'Dictionary of the Bible,' art. *Ant*, App. A.  
Vol. 114.—No. 227.

allusions to these destructive pests. They occur in such numbers as to obscure the sun; they are extremely voracious; they are compared to horses;—the Italians, we may observe, call the locust *Cavaletta*, and Ray's description is 'Caput oblongum equi instar;'—they make a fearful noise in their flight; their progress is irresistible; they enter houses, and devour even the woodwork in them; they are destroyed by falling into the sea; their dead bodies taint the air; they were used as food.\*

Some people have supposed that the locusts which John the Baptist ate in the wilderness were not the insect of that name, but the long sweet pods of the locust-tree (*Ceratonia siliqua*), St. John's bread, as the monks of Palestine call them. It is hardly necessary to say this is quite an erroneous notion. Various species of locusts are now, and have been from time immemorial, used as food. Dr. Kitto says they more resemble shrimps than anything else he has eaten. The law of Moses expressly allowed locusts, four different kinds of which are mentioned, to be used as food. The word erroneously translated 'beetle' in Lev. xi. 22 is clearly some species of *Saltatoria* orthopterous insect, defined as one of the 'flying creeping things that goeth upon all fours, which have legs above their feet † to leap withal upon the earth.' Locusts, like all true insects, have six feet, but the Jews regarded the two anterior pair only as true legs in this family—regarding the latter pair as instruments for leaping. All insects, with the above exception, together with *Molluscos* animals, the *Crustacea*, and the *Annelida*, &c., were to be considered 'unclean.' In respect of quadrupeds, cloven-footed *Mammalia* alone were to be eaten; no quadruped, in short, which did not possess the two requisite conditions of chewing the cud and fully dividing the hoof into two equal parts was, by the Levitical law, accounted as good for food. The camel was excluded because, though a *ruminant*, it does not fully divide the hoof. There is little difference between the Levitical law in the matter of 'clean' and 'unclean' quadrupeds and the common custom of Englishmen as regards those members of the class *Mammalia* which are commonly used as food—the pig amongst the *Pachydermata*, and the hare and rabbit amongst the *Rodentia*, being the only exceptions.

With respect to 'clean' and 'unclean' birds, amongst which class the ancient Hebrews enumerated the bat, no such simple discriminating rule is given. Besides the bat, twenty names of birds are mentioned which were to be regarded as unclean: these

\* 'Dictionary of the Bible,' art. *Locust*.

† i. e. 'which have their *tibiae* so placed above their *tarsi* as to enable them to leap.'—*Ibid*.

names must be understood to comprise more than our term species, as the expression 'after their kind' indicates. The list, therefore, may be understood to exclude as unfit for food all the order *Raptores*, most if not all the family of *Corvidæ*, the hoopoe (lapwing, A. V.) amongst the *Certhiadae*, perhaps all the order *Grallatores*, and the *Pelicanidae* amongst the natatorial order. 'The list is confined,' as Hamilton Smith observes, 'nearly to the same genera and species as are at the present day rejected in all Christian countries.'\*

Of Fish, such as were devoid of fins and scales were pronounced unfit for food. 'These shall ye eat of all that are in the waters: whatsoever hath fins and scales in the waters, in the seas, and in the rivers, them shall ye eat.' The whole families of the *Siluridae* and the *Squalidae* would, therefore, be excluded as being destitute of true scales. Eels, doubtless, came under the same category, although these fish do possess scales, so small, however, as probably to have been unobserved by the ancients. The modern Jews still abstain from eating eels. The fish 'without fins' probably mean the *Raiadae*, or skate family, the large expanded pectoral and ventral fins characteristic of the group not being regarded as fins by the ancient Hebrews; at any rate, it is difficult otherwise to understand the meaning of the expression, for all fish have fins.

All Reptiles, Molluscs, Crustacea as crabs and lobsters, and the whole class of *Annulata*, with the single exception of the saltatorial Orthoptera, were forbidden as food by the law of Moses as coming under the category of 'creeping things that creep upon the earth, or that go on the belly,' or 'that multiply feet.' It is true that the Conchiferous molluscs, such as oysters, are not disallowed by any precise definition; but there is little doubt that they would be considered 'abominable things.'

Of imported zoological specimens, especial mention is made of apes and peacocks, which the navy of Tharshish brought once in three years to Jerusalem. That the Hebrew words *kôphim* and *tokeyim* are correctly rendered 'apes' and 'peacocks' is unquestionable. The Hebrew terms are certainly of foreign origin. Let us hear what a very high authority on all matters connected with language says on this subject:—

'You remember the fleet of Tharshish which Solomon had at sea, together with the navy of Hiram, and which came once in three years, bringing gold and silver, ivory, apes, and peacocks. The same navy which was stationed on the shore of the Red Sea is said to have

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\* 'Cyclop. of Biblical Literature,' vol. ii. p. 899, ed. 1856.

fetches gold from *Ophir*, and to have brought, likewise, great plenty of *algum*-trees and precious stones from *Ophir*.

'Well, a great deal has been written to point out where this *Ophir* was; but there can be no doubt that it was in India. The names for *apes*, *peacocks*, ivory, and *algum*-trees are foreign words in Hebrew, as much as *gutta-percha* or *tobacco* are in English. Now if we wished to know from what part of the world *gutta-percha* was first imported into England, we might safely conclude that it came from that country where the name *gutta-percha* formed part of the spoken language. If, therefore, we can find a language in which the names for *peacocks*, *apes*, *ivory*, and *algum-tree*, which are foreign in Hebrew, are indigenous, we may be certain that the country in which that language was spoken must have been the *Ophir* of the Bible. That language is no other but Sanscrit.

'*Apes* are called in Hebrew *Koph*, a word without an etymology in the Semitic languages, but nearly identical in sound with the Sanscrit name of ape, *Kapi*.

'*Ivory* is called either *Karnoth-shen*, horns of tooth; or *shen-habbim*. This *habbim* is again without a derivation in Hebrew, but it is most likely a corruption of the Sanscrit name for elephant, *ibha*, preceded by the Semitic article.

'*Peacocks* are called in Hebrew *tukhi-in*, and this finds its explanation in the name still used for peacock on the coast of Malabar, *togēi*, which in turn has been derived from the Sanscrit *sikkīn*, meaning, furnished with a crest.

'All these articles, ivory, gold, apes, peacocks, are indigenous in India, though of course they might have been found in other countries likewise. Not so the *algum-tree*, at least if interpreters are right in taking *algum* or *almug* for sandalwood. Sandalwood is found indigenous on the coast of Malabar only, and one of its numerous names there, and in Sanscrit, is *valguka*. This *valgul(ka)* is clearly the name which Jewish and Phœnician merchants corrupted into *algum*, and which in Hebrew was still further changed into *almug*.\*

The question as to the identification of the *algummin* or *almuggin* trees of Solomon's fleet leads us to say a few words on the botany of the Bible. Space, however, compels us to be brief in our remarks.

Much remains to be done in this branch of Biblical natural history. 'The botany of the Bible,' says Dr. Balfour, in his useful little work whose title is given at the head of this article, 'can be fully worked out only by those who travel in Eastern countries, and who are acquainted with Hebrew, Syriac, Arabic, and other cognate languages. A great deal of valuable information may be gathered on the spot which cannot be otherwise

\* 'Lectures on the Science of Language,' p. 189-191. By Max Müller, M.A. London, 1861.

obtained.' Another essential, in our opinion, is that the inquirer should, for a year or two at least, be resident in the country. It is a very difficult matter for mere visitors to obtain adequate information on such subjects. As an instance of the truth of this remark we quote an extract from a letter we received about two years since from Dr. Hooker, who had then lately returned from Palestine :—

' I procured a great many plants, but very little information of any service to you, though I made every inquiry about the subject of your notes. You would hardly believe the difficulty in getting reliable information about the simplest subjects : *e.g.* Three to all appearance unexceptionable English resident authorities (including a Consul and a medical gentleman) assured me that the finest apples in Syria grew at Joppa and Askalon ; the *fact* appeared so improbable that though one authority had eaten them, I could not resist prosecuting the inquiry, and at last found a gentleman that had property there, and knew a little of horticulture, who assured me that they were all *quinces*, the apples being abominable ! '

We have no space to speak of the olive, with ' its twisted stems and silver foliage ; ' or of the pomegranate, whose ' tender green and scarlet blossoms, ' says Professor Stanley, ' are amongst the most beautiful of sights, even when stripped of the associations which would invest the tamest of their kind with interest ; ' or of the oaks of Moreh, of Mamre, and of Bethel the ' oak of tears. ' \* We must only just allude to the carob-tree (*Ceratonia siliqua*), the long sweet pods of which were doubtless the ' husks ' which the ' swine did eat ' in the parable of the Prodigal Son ; and to the sycamores,—not the tree commonly but erroneously called by this name in our own country, but the *Ficus sycamorus*, with leaves something resembling those of the mulberry, and with fruit like a fig, which grows in clusters on the trunk and large branches. In order to render the fruit of this tree palatable, it is necessary to scrape off a part of it, or to make incisions into it ; hence Amos says of himself, ' I was a scraper of the sycamore fruit. '

The palm, so frequently alluded to in the Bible, appears to be becoming scarce in central Palestine. It is spoken of by Stanley as ' breaking the uniformity of the Syrian landscape by the rarity of its occurrence. . . . Two or three in the gardens of Jerusalem, some few, perhaps, at Nablûs, one or two in the plain of Esdraelon, comprise nearly all the instances of the palm in central Palestine. ' †

\* See Dr. Hooker's paper on ' the Oaks of Palestine, ' Transac. of Lin. Soc., vol. xxiii. p. 381.

† ' Sinai and Palestine, ' p. 144.

The mustard-tree of the New Testament demands more extended notice. 'The kingdom of Heaven is like to a grain of mustard seed which a man took and sowed in his field, which indeed is the least of all seeds; but when it is grown, it is the greatest among herbs, and becometh a tree, so that the birds of the air come and lodge in the branches thereof.' 'It is obvious,' says Balfour, 'that it cannot be the common mustard of this country, which is an herb of annual growth; whereas the Evangelists speak of the plant as a tree having branches on which the fowls of the air lodge.' Again, 'our Lord alludes to the smallness of the seed in Matt. xvii. 20, and Luke xvii. 6. The mustard-plant then was a branching tree with a small seed.' From the conclusion that no mustard-plant (*Sinapis*) can represent the 'great tree' of the parable—a conclusion, however, too hastily arrived at—writers have endeavoured to discover some tree indigenous to Palestine which should literally fulfil the Scriptural demands. It is now in this country almost universally allowed that the *Salvadora persica* is the tree signified. The late excellent Dr. Royle, an able botanist and an accomplished scholar, is the author of this theory. In a paper read before the Royal Asiatic Society, entitled, 'On the Identification of the Mustard-tree of Scripture,' this writer advances many very plausible arguments in favour of the claims of the *Salvadora*. The same thought occurred to Messrs. Irby and Mangles, who observed this tree near the Dead Sea.

'There was one curious tree,' they say, 'which we observed in great plenty, and which bore fruit in bunches resembling in appearance the currant with the colour of the plum; it has a pleasant, although strongly aromatic taste, exactly resembling mustard. The leaves have the same pungent flavour as the fruit, although not so strong. We think it probable that this is the tree our Saviour alluded to in the Parable of the mustard-seed, and not the plant which we have in the north.'

An additional argument in favour of the *Salvadora* is its Arabic name *Khardal*, which signifies 'mustard.' Its claims are thus summed up by Royle:—

'The *Salvadora persica* appears better calculated than any other tree that has yet been adduced to answer to everything that is required, especially if we take into account its name and the opinions held respecting it in Syria. We have in it a small seed, which sown in cultivated ground grows up and abounds in foliage. This being pungent may like the seeds have been used as a condiment, as mustard and cress is with us. The nature of the plant is to become arboreous, and thus it will form a large shrub or tree, twenty-five feet high, under which a horseman may stand when the climate and soil are favourable;

favourable; it produces numerous branches and leaves, under which the birds may and do take shelter, as well as build their nests; it has a name in Syria which may be considered as traditional from the earliest times, of which the Greek is a correct translation; its seeds are used for the same purposes as mustard; and in a country where trees are not plentiful, that is, the shores of the Lake of Tiberias, this tree is said to abound, that is, in the very locality where the Parable is spoken.'

Notwithstanding all that has been advanced by Royle, the *Salvadora persica* is certainly *not* the tree in question. In the first place this tree is a tropical plant; it grows only in the small low valley of Engedi, near the Dead Sea, where Irby and Mangles saw it. We were sceptical some time ago as to the claims of the *Salvadora persica*, and requested Dr. Hooker just before his visit to Palestine two years since to pay particular attention to the localities of that tree. It is obvious that it is necessary for the plant of the parable to be a *common* one, otherwise it would never have been used in a parable at all. Dr. Hooker thus wrote to us on his return from the East: 'I could not hear of any other Syrian locality for this plant except the sub-tropical valley of Engedi. I do not believe at all it is found elsewhere in Syria; no one has ever seen or heard of it elsewhere. The vale of Engedi is doubtless the *Ultima Thule* of its northern wanderings.' Again, the Greek *σινάπι* is said to be a 'garden herb,'\* a definition which would not at all suit the *Salvadora persica*.† But if the mustard-plant of Scripture is *not* this tree, what is the plant denoted? We have not a shadow of doubt that it is nothing less than the common *Sinapis nigra*. Irby and Mangles speak of the usual mustard-plant growing wild as high as their horses' heads. Dr. Thomson has seen the wild mustard on the rich plain of Akkar as tall as the horse and the rider. As to the plant being called 'a tree,' or a 'great tree,' it is clear that the expression is not only an Oriental hyperbole, but that it is used with reference to some other thing. With respect to trees, properly so called, the *σινάπι* was no tree; but compared with the other pot-herbs of the garden, it might justly be called a tree, considering the great relative size which it attains. There is not a word in the New Testament about birds 'building their nests' in the branches of this plant; the Greek word simply denotes 'settle or rest upon anything;' and if it is understood, as is most natural, of the small insectorial order of birds, the linnets, finches,

\* *λάχανον*.

† Moreover, the seed of the *Salvadora persica*, though small, is certainly larger than the seed of the fig, so common in Palestine.

and

and such like, the claims of the common mustard-plant are sufficiently established. It is certain, from Dioscorides, Pliny, and other Greek and Latin writers, that mustard seeds were valued as a condiment, even as they are with us. Is it not more probable that the Jews in our Lord's time were in the habit of using the seeds of some common *Sinapis* rather than the seed of a tree which cannot fulfil the Scriptural demand of being called a 'pot-herb,' even allowing the extreme improbability of its ever having occurred as a common plant in Palestine?

The shittim wood which was so extensively used in the formation of the tabernacle, the ark of the covenant, &c., was probably supplied by the *Acacia Seyal* or the *A. Nilotica*. Speaking of the vegetation of a portion of the Peninsula of Sinai, Canon Stanley observes:—'The vegetation is still what we should infer from the Mosaic history. The wild acacia, under the name of "sunt," everywhere represents the "seneh," or "senna" of the Burning Bush. A slightly different form of the tree, equally common under the name of "sayal," is the ancient "shittah," or as more usually expressed in the plural form (from the tangled thickets into which its stem expands) the "shittim," of which "the tabernacle was made"—an incidental proof, it may be observed, of the antiquity of the institution, inasmuch as the acacia, though the chief growth of the Desert, is very rare in Palestine.' According to M. Bové and other travellers, acacia trees are still not uncommon in the valleys of the Wanderings. 'Le lendemain,' says Bové, 'en traversant le Voodé (Wady) Schen, je vis un grand nombre d'Acacia Seyal; cet arbre s'élève à la hauteur de vingt à vingt-cinq pieds.' It is true that neither of the above-named trees could have furnished *single boards* of the required length (10 cubits by  $1\frac{1}{2}$  cubit), but the *Acacia Serissa* of Cairo might have done so; supposing it ever grew in the deserts of Sinai: we do not, however, see any necessity for understanding each *Keresh* (Heb.) to denote a *single plank*. Ezekiel uses the singular form of the term collectively to denote 'the deck of a ship,' so that two or more boards joined together might well be called 'one board.'

Every sketch of the botany of the Bible, however imperfect, should contain some notice of the far-famed cedars of Lebanon.

The following remarks of Dr. Hooker will be read with interest, containing, as they do, the most recent and the most scientific account we possess:—

'So far as is at present generally known, the cedars are confined on Lebanon to one spot, at the head of the Kedisha Valley; they have, however, been found by Ehrenberg in forests of oak, &c., on the route  
from



from Bsherre to Bainnate. The Kedisha Valley, at 6000 feet elevation, terminates in broad, shallow, flat-floored basins, and is two to three miles across, and as much long; it is here in a straight line fifteen miles from the sea, and about three or four from the summit of Lebanon, which is to the northward of it. These open basins have shelving sides, which rise 2000 to 4000 feet above their bases; they exactly resemble what are called Corrys in many Highland mountains. The floor of that in which the cedars grow presents almost a dead level to the eye, crossed abruptly and transversely by a confused range of ancient moraines which have been deposited by glaciers, that, under very different conditions of climate, once filled the basin above them, and communicated with the perpetual snow with which the whole summit of Lebanon was, at that time, deeply covered. The moraines are perhaps 80 to 100 feet high; their boundaries are perfectly defined, and they divide the floor of the basin into an upper and lower flat area. The rills from the surrounding heights collect on the upper flat, and form one stream, which winds amongst the moraines on its way to the lower flat, whence it is precipitated into the gorge of the Kedisha. The cedars grow on that portion of the moraine which immediately borders this stream, and nowhere else; they form one group about 400 yards in diameter, with an outstanding tree or two, not far from the rest, and appear as a black speck in the great area of the corry and its moraines, which contain no other arboreous vegetation, nor any shrubs but a few small berberry and rose bushes that form no feature in the landscape.

The number of trees is about 400, and they are disposed in nine groups, corresponding with as many hummocks of the range of moraines: they are of various sizes, from about eighteen inches to upwards of forty feet in girth; but the most remarkable and significant fact connected with their size, and consequently with the age of the grove, is that there is no tree of less than eighteen inches girth, and that we found no young trees, bushes, nor even seedlings of a second year's growth. We had no means of estimating accurately the ages of the youngest or oldest tree. It may be remarked, however, that the wood of the branch of the old tree, cut at the time, is eight inches in diameter (exclusive of bark), presents an extremely firm, compact, and close-grained texture, and has no less than 140 rings, which are so close in some parts that they cannot be counted without a lens. This specimen, further, is both harder and browner than any English-grown cedar or native deodar, and is as odoriferous as the latter. These, however, are the characters of an old lower branch of a very old tree, and are no guide to the general character of the wood on the Lebanon, and still less to that of English-grown specimens, which are always very inferior in colour, odour, grain, and texture. Calculating only from the rings in this branch, the youngest trees in Lebanon would average 100 years old, the oldest 2500, both estimates no doubt widely far from the mark. Calculating from trunks of English rapidly-grown specimens, their ages might be put down as low respectively as 5 and 200 years, while from the rate of growth of the

Chelsea

Chelsea cedars the youngest trees may be 22, and the oldest 600 to 800 years old.\*

Dr. Hooker thinks that the cedar grove has not materially decreased since the days of Solomon, and considers it very doubtful whether the wood was ever largely used in Jerusalem for building purposes. Considering the quantity of first-rate oak and pine on all the coast-ranges from Carmel northwards, he believes it improbable that the 'almost inaccessible valleys of the Lebanon should have been ransacked for a wood that has no particular quality to recommend it for building purposes:—

'The lower slopes of the Lebanon,' he continues, 'bordering on the sea, were and are covered with magnificent forests; so that there was little inducement to ascend 6000 feet, through twenty miles of a rocky mountain valley, to obtain a material which could not be transported to the coast without the utmost difficulty and expense. It is further to be remarked that it is difficult to reconcile the hypothesis of the former great extent of the cedar forests with the fact of almost the only existing habitat being the moraines of one of the most populous valleys on the mountains. The cypress (also called cedar by the ancients), the *Pinus Halepensis*, and the tall, fragrant *Juniperus* of the Lebanon, with its fine red heart-wood, would have been far more prized on every account.'

We fully agree with these remarks. The Hebrew *erez* often, it is true, applied to the *Cedrus Libani*, is used in a wide sense to denote any *conifer*. The 'cedar-wood' (*erez*) mentioned in Lev. xiv. 6, for instance, cannot be the *Cedrus Libani*, for the Israelites were, at the time indicated, in the Desert of Sinai, where this tree never grew. The masts which the Tyrians are said to have made out of the wood of 'Cedars of Lebanon' (*erez*) were probably furnished by the *Pinus Halepensis*, and not the *Cedrus Libani*. We take the word *erez* to be generic, and to be applied to any of the larger *Coniferae*; nor do we think that the *Cedrus Libani* has the exclusive right to the denominations of the 'glory of Lebanon,' 'the cedars which the Lord hath planted,' &c., but that the tall juniper and the *Pinus Halepensis* were intended to come in for their share of praise.

We notice the fig-tree only in connexion with the passage in St. Mark, xi. 13, where the circumstance of our Lord cursing the barren fig-tree is related. 'And seeing a fig-tree afar off having leaves, he came if haply he might find anything thereon: and when he came to it, he found nothing but leaves; for the time of figs was not yet.' The apparent unreasonableness of

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\* 'Natural History Review.'

seeking fruit at an unseasonable time, and the consequent injustice of the sentence afterwards pronounced, have been the source of much perplexity to commentators, and numerous attempts at explanation have been given from time to time. Most of these are unsatisfactory. Without, then, pausing to consider them, we pass on at once to give what we are fully persuaded is the true solution. The fig-tree (*Ficus carica*) in Palestine produces fruit at three or four different periods of the year: first, there is the *bôcor*, or early-ripe fig, frequently mentioned in the Old Testament; this ripens on an average towards the end of June, though, under certain very favourable conditions of soil or temperature, the figs may ripen somewhat earlier. After these come the *karmouse*, or summer-fig, which rarely ripens before August, when another crop, called the winter-fig, appears: these last-named figs hang and ripen on the tree even after the leaves have fallen, and, provided the winter proves mild, are occasionally gathered in the spring.

Now, at the time of the transaction mentioned by the Evangelist, viz. the end of March or the beginning of April, it was too late to find winter-figs, and there would be no new figs on the trees larger than small plums, and these sour and hard, wholly unfit to be eaten. But we must remember that the fruit of the fig-tree comes before the leaves: consequently if the tree produced leaves, it should also have had eatable early fruit, had it been true to its pretensions. It was an unusual thing, certainly, for a fig-tree at the end of March or the beginning of April to have on it these leaves, nor is it necessary to inquire what natural causes operated to produce such a phenomenon; it is sufficient to know that these abnormal leaves ought to have been accompanied by abnormal fruit. The whole question turns on the tree's *pretensions* and the typical design of the miracle. It would be unpardonable to omit to notice the beautiful comment of Dr. Wordsworth on this passage:—

‘The fact of this tree having an abundance of leaves and no fruit, is what is here brought out. And the *sin* of the fig-tree (so to speak) was that while it had the *power* given it to bring forth *leaves*, it had not the *will* to bring forth *fruit*. It spent all its sap and strength in making a barren and ostentatious display of exuberant foliage, inviting the hungry passer-by from a distance to quit the road and to come and look for *fruit*, and then baulking him with barrenness when he came to examine it. A solemn warning to all nations and churches, to all societies and individuals who make a profession of piety, but do not bring forth the fruits of faith and obedience in their lives.’

This view, we may add, accords with the interpretation adopted by

by Dean Trench in his valuable work on the Miracles of our Lord.\*

We would, in conclusion, once more draw attention to the great dearth of trustworthy information on the subject of the Natural History of Palestine. Of the geology of that country we know next to nothing, so that here is a wide field full of fruitful promise. What fish swim in the Jordan and in the Sea of Galilee? How far is the ichthyological fauna of Palestine identical with that of the fresh waters of Syria, described by Heckel ('Süsswasser-Fische Syriens, in *Abbild. u. Beschrieb. neuer u. seltener Thiere u. Pflanz. in Syrien*, &c., von Kotscky Fenzl. Heckel u. Redtenbacher, 1843)? We recommend these remarks especially to the consideration of Mr. Tristram, to whom we are already much indebted for his contributions to our knowledge of the ornithology of the Holy Land; and we trust he will forgive us if, in the cause of science, we venture to express a hope that his health will shortly again require a little change of air, and that Palestine will be the country visited.

- ART. III.—1. *Voyages dans les Alpes, précédés d'un Essai sur l'Histoire Naturelle des Environs de Genève.* Par M. de Saussure, Professeur émérite de Philosophie dans l'Académie de Genève. Vols. I., II., III., IV. Published in 1779, 1786, 1796. Neuchâtel.
2. *Théorie des Glaciers de la Savoie.* Par M. le Chanoine Rendu, Chevalier du Mérite Civil. From the 'Mémoires de la Société Royale Académique de Savoie.' Vol. X. 1841.
3. *Essai sur les Glaciers, et le Terrain Erratique du bassin du Rhone.* Par M. Charpentier, Directeur des Mines du Canton de Vaud. 1841.
4. *Système Glaciaire, ou Recherches sur les Glaciers.* Par MM. Agassiz, Guyot, et Desor. 1847.
5. *Travels through the Alps of Savoy; with Observations on the Phenomena of Glaciers.* By Professor James D. Forbes, F.R.S., F.G.S., &c. Edinburgh. 1843.
6. *Occasional Papers on the Theory of Glaciers.* By Professor James D. Forbes. 1859.
7. *Various Memoirs on Glacial Theory, in the Transactions of the Royal Society, 1862, and of the Cambridge Phil. Society.* By W. Hopkins, M.A., F.R.S., F.G.S.

\* 3rd edit., p. 433.

8. *The Glaciers of the Alps.* By Dr. Tyndall, F.R.S., Professor of Natural History in the Royal Institution of Great Britain, and in the Government School of Mines. 1860.

**W**HOEVER has been in the habit of contemplating the beauties of the works of nature or of art must necessarily feel the importance of regarding them from the best points of view. In the grander scenes of nature, for instance, when seen from an ill-chosen point, the mountain may appear too dominant, the expanse of water too large, or the distance too insignificant; and, however grand or beautiful each object may be individually, the general effect may be unsatisfactory to the cultivated eye. We must seek for that point in which every object appears in its due proportion, and helps to produce that general harmony in which the highest beauty of nature and art essentially consists. And so it is with science. In the earlier periods of the development of any complicated branch of knowledge, its several parts will frequently appear more or less disjointed, out of keeping with each other, and wanting in that more perfect harmony which is the surest test of truth in science, as well as the highest result of the beauties of external nature. Still Time, the great arbiter in such matters, gradually asserts his influence, and a period arrives at which we may be enabled to form at least a fair approximate estimate of the relative merits of the various conclusions in an advancing science. Such appears to us to be at present the state of Glacial Science. We have hitherto abstained from taking much part in the discussion of the subject, notwithstanding the popular and scientific interest which has been justly attached to it, not merely on its own account, but also on account of its important bearings on certain conclusions of geologists. We believe that premature criticism has been bestowed upon it; and if we now present a view of it somewhat different from those which have hitherto been more frequently advocated, we trust that we shall be regarded as doing so, not from partiality or prejudice, but on account of the present more perfect development and altered phase of the science.

Most of our readers will probably have formed some more or less distinct conception of a glacier; but we think it advisable to preface our examination of the various views which have been put forward on the subject, by a very general and brief description of those curious masses of ice and of the mode of their formation. If a mountain be of sufficient elevation, the temperature in its higher portions may be always below the freezing temperature, in which case the aqueous vapours which rise in the atmosphere  
above

above the summit of such a mountain, and subsequently fall upon it, must usually assume the form of snow ; and thus it is that continual additions of snow are supplied to these elevated regions. At the same time there are several causes which restrict this increase within determinate limits. Thus the high winds which frequently play about the tops of the mountains are often the means of scattering thence a certain quantity of snow, and depositing it at lower levels. The frequency of avalanches, also, in the higher regions is well known to the mountain traveller ; and another cause for the diminution of these elevated masses of snow is to be found in the radiating heat of the sun, which thaws a certain superficial portion of the mass on which it falls, and thus affords an effective aid in counteracting the tendency to indefinite accumulation.

The water produced by this melting sinks into the porous mass of snow ; and, since the temperature of the mass must necessarily, at the elevations we are here contemplating, be less than that of freezing, the percolating water will be, at least, partially frozen, and will constantly tend to convert the mass of snow into ice, and thus to give it greater firmness and consistency. Pressure and certain other causes may also assist in the work of consolidation, till at length the mass is found to assume its final character of transparent solid ice.

In the higher regions of a mountainous chain there are usually many precipitous peaks and ridges with deep intervening continuous valleys, or more circumscribed circus-like hollows. The great majority of these have openings by means of which their drainage is more or less perfectly effected. If the ridge of a snow-mountain have this character, it is manifest that the snow which covers it will always tend to accumulate in the valleys, as being more sheltered than the neighbouring heights. Now it is found by observation that the masses of ice and snow thus accumulated do not remain quietly at rest, but creep slowly forth from their original cradles through the drainage valleys above mentioned. These latter valleys are in general nearly in the lines of quickest descent on the mountain side, and it is along them that the glacial masses of ice and snow descend from the higher regions in which they originate. Here, then, we have another and effective cause in constant action to limit the accumulation of snow and ice on summits of mountains on which they are formed, and to establish the equilibrium between the growth of the whole glacial mass in the higher and colder regions and its waste in the warmer regions below.

When a range of mountains is so high that its summits are  
covered

covered with perpetual snow, the line above which the snow never disappears is called the *snow-line*. The summer temperature at any point of it never exceeds  $32^{\circ}$  (Fahr.). The elongated portions of the general glacial mass which protrude below this line in valleys descending along the sides of the mountain, as above intimated, are more especially termed *glaciers*. The larger of them (those of the *first order* or *primary glaciers*) vary from four or five to ten or twelve miles in length. These are not essential limits, but they hold approximately in the Alpine glaciers, with which we are more familiarly acquainted than with any other. It is on *glaciers*, as thus defined, that the greater portion of recorded and systematic observations have been made.

A limit is imposed to the linear extension of glaciers, by the rate at which the ice melts as it descends into the warmer regions below the snow-line. In these regions the causes of decay, estimated by their whole annual effect, will predominate over those of production, and the glacier becomes thinner as it descends, till, at its lower extremity, the thickness vanishes and the glacier ceases. This dissolution of the mass takes place, in a greater or less degree, on its lower and on its lateral surfaces, as well as on the upper one, though it is at the latter surface that the greater part of the melting is produced. This process, it will be observed, is not altogether continuous during the whole year; for in the winter it will evidently be entirely arrested on the upper surface, which, at that season, becomes deeply buried in snow. The annual effect in each successive year will, nevertheless, be that due to the predominance of destructive causes. The whole mass is thus in the course of years reconverted into water, which then rushes down the valley with seeming impatience to regain the ocean from which it parted perhaps some two or three centuries before.

In contemplating a snowy mountain, we are led almost unconsciously to regard the enormous accumulation of ice and snow which gives to its summits their characteristic aspect, as being no less typical of all that is unchangeable than the rocks themselves on which it rests. We see, however, from the brief preceding explanations, that this perpetual snow, as it is termed, is rather a type of perpetual motion than of constant rest. It will be seen, in following the mutations of any constituent particle of the glacial mass, that its conversion from water into aqueous vapour, its ascent above the tops of the highest mountains, its conversion successively into snow and into glacial ice, and its final reversion into water, and descent to the level from which it rose—that all these mutations form, in fact, one of those  
numerous

numerous cyclical or periodical processes by which Nature, in all her regions, unites the beauty and variety of changing aspects with a real stability capable of almost infinite duration.

It has been stated above that a glacier properly so called is the elongation below the snow-line of the general glacial mass which occupies the highest valleys and receptacles of mountains of sufficient elevation. A primary glacier will frequently originate in a single glacial receptacle above the snow-line, or it may proceed from two or more such receptacles, these partial glaciers uniting afterwards to form one principal glacier, precisely as two streams from different sources may unite to form one principal river. Thus the main glacier of the Aar, the scene of M. Agassiz's researches in the Bernese Alps, is formed by the junction of two great tributaries or affluents proceeding from separate sources, and termed, from the mountains in which they respectively originate, the Finsteraar and Lauteraar glaciers, the former being on the right, the latter on the left in descending. The whole forms a rough representation of the letter Y. The length of the resulting glacier, from the point of junction of these two principal tributaries to the lower extremity of the glacier, is nearly five miles, and its greatest width, which is at the junction, is upwards of three quarters of a mile. There are also many minor tributaries to this glacier, most of which unite above the junction to form respectively the two great tributaries, while, below the junction, four distinct lateral tributaries swell the united glacier by flowing into it from the valleys, along its precipitous flanks. The glaciers from Mont Blanc at Chamouni, the scene of Principal Forbes's more detailed observations, are also among the most important of the Alpine glaciers. Other glaciers on the southern side of Mont Blanc, the glacier of Zermat descending from Monte Rosa, the glacier of the Rhone and others, will be recollected as among the principal primary glaciers which have most occupied the attention of glacialists. The same general description is applicable to them all.

The term *primary* is generally used, as we have used it above, to denote the glaciers of large dimensions. There are also *secondary* glaciers, the horizontal extent and thickness of which are much smaller than those of a primary glacier. The inclination of the beds on which they rest is usually much greater than in the larger glaciers, and they are generally restricted to higher localities on the sides of the mountains. We are not aware of any series of accurate observations having been made on these smaller glaciers. We would recommend them to the notice of future observers. It would not only be curious to observe how far



far the different glacial phenomena may be modified by their peculiar conditions, but it is also very possible that they might afford valuable tests, whether at rest or not, of the truth of particular theories of glacial motion.

The inclination of the surface to the horizon in large glaciers usually varies from  $2^{\circ}$  or  $3^{\circ}$  to  $8^{\circ}$  or  $10^{\circ}$ . As a general rule the surface is most rough and dislocated where the inclination is greatest and most irregular. In many glacial valleys there are also steep escarpments, over which the ice is precipitated, and broken into thousands of enormous fragments, forming one of the wonders of Alpine scenery. The re-cementing of these fragments into one continuous mass of glacial ice at the foot of an ice-fall was, till recently, one of the most mysterious of glacial phenomena.

When we look down on the surface of a glacier from a considerable height, the minor inequalities of its surface become scarcely sensible. We may generally observe, however, even on the smooth portions of the surface, certain transverse lines, rare in the centre of the glacier, but more numerous in its two marginal portions, in each of which these lines are respectively nearly parallel; and as they proceed from the flanks on either side towards the central portion, they incline towards the upper extremity of the glacier, instead of being perpendicular to its axis. These are the *crevasses*, gaping, vertical fissures, often large enough to present the most serious impediments to the progress of the traveller across them. They are rarely longitudinal in the elongated or canal-shaped glaciers, but in certain cases where the valley becomes suddenly divergent in its descent, the crevasses become also divergent, like the rays of a fan. The glacier of the Rhone, at its lower extremity, presents the best and most familiar example of crevasses of this latter kind. The theoretical explanation of all these phenomena belongs to the mechanics of glacial motion.

There is another group of objects, very striking in a bird's-eye view of the surface of a glacier. We allude to the long, dark, continuous lines of *débris* nearly parallel to the axis of the glacier, and stretching frequently from points near its upper extremity to its final termination. To the eye situated as above supposed, they appear free from all local asperities, following in graceful curves all the flexures of the valley. They consist of an aggregation of rocks and smaller detrital matter, the rocks varying from small pebbles to angular blocks of many tons in weight. These are the *moraines*. One is almost invariably found on each side of the glacier, and close to the bounding walls of the valley; they are the *lateral moraines*. Another

moraine, and usually the largest, is observed to coincide very nearly with the axis of the glacier, and is called the *median moraine*. In large glaciers there are frequently also other smaller moraines intermediate and parallel to those above mentioned. The glacier of the Aar furnishes, perhaps, the best examples of existing moraines with which we are well acquainted. Not far below the junction of its two great tributaries, as many as six or seven may be distinctly recognised. They are laid down with great accuracy in the map of this glacier, in Plate III: of the Atlas which accompanies the last work of M. Agassiz on glaciers, the *Système Glaciaire*. It should also be stated that aggregations of large blocks and smaller débris are usually found at the terminations of glaciers in front of the ice itself, and extending more or less completely across the valley. They are the *terminal moraines*.

The motion of a glacier is slow and persistent during all seasons, but slower in winter than in summer, and varying generally at different times and in different places, from a few inches to twenty or thirty inches a day. Moreover, in an elongated canal-shaped glacier, the axial portions move faster than what are termed the lateral or marginal portions. Also, the more superficial parts of the glacial mass move faster than the inferior parts. These inequalities of motion show that a glacier, in its aggregate mass, has a power of changing its form, so as to admit of these irregularities of motion, as well as to enable it to adapt itself to all the irregularities in the form and dimensions of the valley along which it descends. This property of the general glacier we call its *pliability*. It has been the subject of much earnest discussion.

The motion of the glacier enables us to account very clearly for the existence of central moraines. The lateral ones are manifestly due to the various blocks and débris which fall down the precipitous sides of the glacial valley on the glacier beneath, by the onward motion of which they are carried forward, sometimes the whole length of the glacier, and deposited in its terminal moraine. If, however, the lateral moraine belonging to one flank of a large tributary glacier meets the corresponding flank of another tributary, with its moraine (as at the junction of the two great tributaries of the Aar glacier), the two moraines necessarily unite, and move forward along the central line of the resulting glacier as its central moraine. A similar explanation applies to the moraines which are intermediate to the median and either lateral moraine. They all arise from lateral and usually smaller tributaries to the general glacier or to its principal affluents. If a lateral moraine, for instance, be formed in  
the

the upper portion of a large tributary, and a smaller tributary pour down its contents into the larger one, the lateral moraine of the latter, conjoined with one of the lateral moraines of the smaller tributary, will be thrust away from the side of the glacial valley, and will become one of the intermediate moraines above mentioned. A similar explanation applies to other moraines of this kind, the number of which is usually indicative of the number of minor tributaries which have helped to produce the general glacier. Many of these moraines extend to the lower extremity of the glacier and deposit their contents at the terminal one, which would thus grow incessantly, were it not that large portions of it are constantly removed by the current of water, frequently a powerful one, which issues from beneath the glacier at its extremity. Portions also of the lateral moraines work down to the bottom of the glacier, and are finally pushed forward to its extremity.

The powerful agency of glaciers, in transporting blocks of enormous magnitude from their original sites to points many miles distant, will be easily understood from what precedes. The recognition of this operation of transport as the daily employment, as it were, of nearly all glaciers, has led to some highly interesting conclusions in geology.

When the traveller descends from the high point of view from which we have supposed him to survey the glacier, and begins to traverse its surface, he becomes sensible of the rugged route along which he has to make his way. He finds that many of the crevasses, which appeared to him like so many narrow well-marked lines, are really deep yawning fissures, over which it is frequently impossible to pass without bridging them over by some artificial means. The large central moraines, also, which appeared like even dark longitudinal stripes on the glacier, he finds to be frequently elevated ridges of 20 or 30 feet in height. This elevation does not arise simply from the accumulation of the blocks and débris of the moraine, but partly also from an icy ridge which underlies them, and which has been formed by the protection against the wasting effects of sun and rain, afforded by the débris to the ice beneath it. *Glacier tables*, formed by large single blocks poised on pedestals of ice, are produced in a similar manner. Also the less dislocated portions of the glacier surface present, especially on sunny days, a beautifully bright effect, arising from the innumerable rills of water produced by the superficial melting of the ice. These rills sometimes form, by their confluence, considerable rivulets, which, of course, precipitate themselves into the first crevasse that crosses their course, thus making their way to the bottom of the glacier, whence the

water is finally discharged from its lower extremity. The volume of water thus discharged in the winter is small, as might be expected.; but in the warmer summer months is sufficient, in the case of a large glacier, to form at once a river of considerable magnitude.

It is impossible to overestimate the sublimity and beauty of these glacial masses, surrounded by their mountain accompaniments, whether we see them intruding themselves, as it were, at their lower extremities, into the fertile valleys of the lower Alps, and increasing by contrast the beauty of the summer verdure there, or whether we contemplate them in their solitary grandeur in the remoter portions of their higher regions. It was in 1841 that M. Agassiz may be said to have established himself on the glacier of the Aar, just below the junction of the two primary tributaries above described, for the purpose of observing the phenomena which the glacier might present to him. He there erected for himself, and two or three scientific friends who accompanied him, the tent which soon became so well known as the *Hôtel Neuchâtelois*, where, in that and two or three subsequent years, he received, with characteristic courtesy and hospitality, a large number of the philosophers of Europe. This glacier affords peculiar advantages for observations on glacial phenomena, and it was for this reason principally that M. Agassiz selected it. Nor should we conceive a continued summer residence on so accessible a glacier, and one which may be so easily traversed in any direction, as otherwise than very enjoyable. During the day-time, when the weather was fine, we have seen its whole surface alive, as it were, with innumerable gurgling rills of water, which, with the brightness of the snowy mountains, gave, even amidst the surrounding desolation, an animation to the scene which dissipated all feeling of loneliness. At sunset this scene is often suddenly and singularly changed. On the disappearance of the sun's rays, the surface-melting of the glacier, with every rill resulting from it, is immediately arrested, and, if the atmosphere is sufficiently serene, all is reduced at once to almost perfect stillness. The silence becomes imposing. Every little rill being hushed, there is sometimes literally not a sound to be heard, save that of the distant avalanche, occurring just often enough to make one the more sensible of the intensity of the silence. Such scenes offer, indeed, an adequate reward to every energetic traveller for all the effort he can make, and all the fatigue he may encounter, in seeking them.

We have no intention of entering into the earlier history of glacial science. We can do little more than mention the names of such glacialists as Simler, Scheuchzer, and Grüner, who, with others

others of inferior note, collected a considerable number of facts respecting the phenomena and topography of glaciers. Scarcely any facts, however, were accurately observed, and a great part of their theories were formed with very little knowledge of physical and mechanical principles. But De Saussure's work, '*Voyages dans les Alpes*,' was of a far higher order than any which had preceded it. The author was a Swiss philosopher fond of physical science, and a devoted admirer of his native mountains. He resided at Geneva, and availed himself of his proximity especially to Mont Blanc to make visits to that mountain, and also to the other Swiss mountains, almost every summer for upwards of twenty years. He commenced his observations in the year 1760. They were not restricted to glaciers, but were equally extended to all those numerous physical, geological, and topographical facts which that region presents to the notice of the philosophical traveller prepared to appreciate at once the true value of the principles and laws by which Nature works, and the beauty of those varied and magnificent scenes which, in a country like Switzerland, she always presents to us. The results of all the long-continued observations of this philosophical traveller are embodied in his work above mentioned, consisting of four quarto volumes published at different times, as additional matter was collected and arranged for each successive volume. The whole work consists of a happy combination of scientific observation and philosophical discussion, enlivened by the introduction of agreeable personal details, and charming descriptive touches of those magnificent scenes of beauty which characterise these Alpine regions, but which at that time were imperfectly known, even to the few secluded inhabitants of the lower and more accessible valleys of the district. There is something peculiarly national in this work, and the name of De Saussure is one of which his countrymen may reasonably be proud. Many of his more abstract scientific observations have been superseded, as might be expected, by more advanced and recent researches; and the region which he was the first to describe in systematic detail is now popularly known from the large influx of travellers. But it must not be forgotten that his work remained for half a century the recognised and unrivalled receptacle of the best descriptions which existed of the scenery and physical phenomena of the Alps.

De Saussure did not devote his special attention to glaciers, and does not appear to have added to the then-existing knowledge of the subject much that was absolutely new, either in observed phenomena or in abstract reasoning. The great advantage which he conferred upon it seems to have been in methodising  
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and generalising the knowledge or suggestions of those who had preceded him, rather than in adding to it discoveries of his own. He was prepared for this task of generalisation by his large acquaintance with the general phenomena of glaciers derived from personal observation. The distinct idea that glaciers moved by sliding over their beds appears to have been first advocated by Grüner, and subsequently adopted by De Saussure; but the latter was enabled by his larger acquaintance with glaciers to give to this view a wider generality, and therefore it is that his name has become so intimately associated with what has been termed the *sliding theory* of the motion of glaciers. Again, others had described, though very imperfectly, the moraines of glaciers; but De Saussure was the first to describe them systematically, and to recognise, in some degree, the important inferences deducible from the actual positions of portions of the blocks and detritus transported from their original sites by former glaciers. At the same time, it is singular that he should not have recognised the obvious origin of central moraines in the confluence of two lateral moraines belonging respectively to two confluent tributaries, as above described. He supposed them, on the contrary, to arise from a continual convergency of the lateral portions of the glacier towards its axis in the course of its onward motion—a conclusion entirely at variance, as we shall see, with subsequent observation.

The preceding explanations and descriptions have been designed to point out generally, and without details, the process by which glaciers are generated and maintained, and to indicate the aspect which they present to the eye of the traveller who may or may not desire to penetrate into the more hidden secrets of glacial mysteries. We believe that the pleasure which any intelligent traveller may derive from the contemplation of the external beauties of Alpine scenery may be materially enhanced by some acquaintance with the nature and constitution of these enormous moving masses of ice and snow. Those who may wish to acquire a more profound acquaintance with the subject must, of course, enter into the minuter details of observation and experiment, and must, moreover, bring to the task a considerable amount of mechanical and physical science. A portion of the remainder of this review will necessarily involve certain details more especially intended for the latter class of readers, but there will be much at the same time which may be easily understood by the more general reader, and which, we trust, may add to any interest he may already feel in glacial phenomena and glacial theories.

The internal temperature of a glacier has a bearing, to a greater  
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or less extent, on most of the more important problems which glaciers present to us. We shall therefore consider this branch of our subject before we enter into the details on other branches of it.

We believe that M. Agassiz is the only one who has made direct experiments for the determination of the internal temperature of glaciers. A vertical bore had been made, for a different purpose, in the glacier of the Aar not far below the junction of its two principal affluents, of the depth of 60 mètres, or about 200 feet. Other bores were also made near the former one, of the depth of a few mètres. At the end of July, and a few days in the beginning of August, 1842, M. Agassiz observed the temperature in the shallower bores during fifteen days successively, at depths between 3 and 5 mètres, and found it to be invariably the temperature of freezing, neglecting very small discrepancies, in three only of the observations, manifestly due to some accidental cause. Simultaneously with these observations, M. Agassiz also examined several times the temperature indicated by the thermometer sunk to the bottom of the deeper bore of about 200 feet. He found it invariably at the freezing temperature, the zero of the Centigrade, and  $32^{\circ}$  of Fahrenheit.

These observations leave no doubt of the interior temperature having been very near  $32^{\circ}$  (Fahr.) at every point to the depth of 200 feet, during the summer months, after the snow of the preceding winter had entirely disappeared from the surface of the glacier.

Still these observations were only applicable to the summer months. In order to render them as complete as he was able to make them for the winter months likewise, M. Agassiz placed a thermometer in the glacier at the depth of  $2\frac{1}{10}$  mètres, or about 7 feet, in the summer of 1842. After remaining there two years it was taken out, and showed that the minimum temperature to which it had been reduced during that time was  $2\frac{1}{10}^{\circ}$  (Cent.), or very nearly  $3\frac{1}{2}^{\circ}$  (Fahr.) below the freezing temperature. Consequently  $28\frac{1}{2}^{\circ}$  (Fahr.) was very nearly the lowest temperature which the glacier had acquired in two successive winters in that particular locality. M. Agassiz does not appear to have determined the winter temperature in the bore of 200 feet.

To explain the manner of determining the temperature generally at any point within the glacier, it will be necessary to state briefly the law of temperature within the superficial portion of the earth's crust, as determined by theory, and sanctioned by observation to the greatest depth (upwards of 2000 feet) to which man has been able to penetrate.

There is a very small uniform flow of heat from the interior parts

parts of the earth through its outer solid crust, into the circum-ambient space. If the atmospheric temperature in any region of the earth's surface were constant and equal to the mean annual temperature there, the terrestrial temperature immediately beneath the surface would be the same as the constant atmospheric temperature; and at a point at any proposed depth beneath the surface, the temperature would exceed the superficial temperature by an amount increasing by  $1^{\circ}$  (Fahr.) for an increase in depth of about 70 feet. This is called the *mean* terrestrial temperature. But the atmospheric temperature changes from one season to another, and this superinduces a corresponding change in the terrestrial temperature; that change being greatest immediately beneath the surface, and decreasing with the depth till it becomes insensible at the depth of about 60 or 80 feet. Moreover, the atmospheric temperature varies from day to night, and such is also the case with the terrestrial temperature, but only to depths not exceeding one or two feet. Thus there is a *diurnal* variation of the terrestrial temperature to the depth of one or two feet, and an *annual* variation to the depth of 60 or 80 feet; while at greater depths the temperature at each point (the mean terrestrial temperature) is invariable from year to year, but is greater in proportion to the depth of the point beneath the surface.

If the upper stratum of the earth were ice (as it may be considered to be in the case of a glacier), results similar to the above would still hold true; because ice, so long as it remains *solid*, or its temperature is below  $32^{\circ}$  (Fahr.), allows heat to pass through it according to the same laws as any other solid. But there is this peculiarity in ice—that it ceases to be solid at the temperature of  $32^{\circ}$  (Fahr.). Now, it is easily proved that the flow of heat from the earth's interior is more than sufficient to raise the temperature of the lower surface of any considerable glacier, under ordinary conditions, to the above temperature. A part only, therefore, of the transmitted internal heat is employed in producing this effect; the remainder is employed in melting the ice at the lower surface of the mass, whence it necessarily follows that no considerable glacier can be frozen to its bed. The *mean* temperature of the glacier will vary from  $32^{\circ}$  (Fahr.) at the lower, to a temperature at the upper surface which depends on the atmospheric temperature, and is, in the middle region of the Alpine glaciers (as deduced from M. Agassiz's observations), between  $1^{\circ}$  and  $2^{\circ}$  (Fahr.) below freezing. It will be somewhat lower near the upper, and somewhat higher near the lower end of the glacier. Hence the *mean* internal temperature can never differ much from  $32^{\circ}$  (Fahr.) The actual temperature



perature will be subject to annual and daily variations, like those described in the terrestrial temperature; but these variations will penetrate only to still smaller depths than in the earth itself, nor will they ever exceed a few degrees. Consequently, the internal temperature of a primary glacier will be approximately uniform, especially in its lower portions.\*

There is also another cause which must help in producing the approximate uniformity of the interior temperature. M. Agassiz made a number of experiments on the glacier of the Aar, proving a considerable infiltration of water through the small pores and crevices of the ice;† and though Professor Huxley failed, in certain more limited experiments on the Mer de Glace, to obtain the same result, it would seem very difficult according to all existing evidence to doubt this infiltration as a general fact. If it does take place, the water must enter the glacier at a temperature of 32° (Fahr.), and must constantly tend to raise the interior temperature to that height. The winter cold, within the small depth to which it penetrates, will, more or less, counteract this tendency; but below that depth the temperature must ultimately rise to 32°, and remain constant. This is consistent, it will be observed, with the temperature observed by M. Agassiz at the depth of 200 feet.

These resulting temperatures as above stated are deduced from accurate solutions of the problem, and admit of no ambiguity or appreciable error. They do not appear to us to have been always attended to in speculations on which they have an immediate and important bearing.

We shall now direct the attention of our readers to that property of ice by virtue of which it is capable, at a certain temperature, of what is called 'regelation.' The discovery of this property, and the recognition of its applicability to the explanation of certain glacial phenomena, of which no adequate explanation had been previously given, constitute a most important epoch in the history of glacial science. It rescued our glacial theories from much of the vagueness and indeterminateness which till that time had hovered about them, and assisted greatly in placing the science on that basis of accurate investigation and exact experiment to which, in some of its most important points, it had no previous pretension.

In the month of June, 1850, Mr. Faraday exhibited an experi-

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\* The solution of the above problem will be found in the 'Philosophical Magazine' for January, 1845, vol. xxvi. See also the memoir 'On the Theory of the Motion of Glaciers,' in the 'Transactions of the Royal Society' for 1862. Read May 22nd, 1862.

† 'Système Glaciaire,' chap. ix.

ment at an Evening Meeting of the Royal Institution, in which he showed 'that when two pieces of ice with moistened surfaces were placed in contact, they became cemented together by the freezing of the film of water between them; while, when the ice was below  $32^{\circ}$  (Fahr.), and therefore *dry*, no effect of the kind could be produced. The freezing was also found to take place under water; and, indeed, it occurs even when the water in which the ice is plunged is as hot as the hand can bear.'\*

It was a generalisation of this simple but curious fact, that suggested to Dr. Tyndall the experiments which have so largely affected the state of glacial science. In the above experiment the two blocks of ice not only cohered to each other, but became so perfectly united that it was no longer possible to recognise their plane of junction. Now it occurred to Dr. Tyndall that if *two* pieces were capable of thus uniting, any number of pieces must equally unite if placed under similar conditions; and consequently that we might expect that an indefinite number of indefinitely small fragments, under a pressure which should secure the requisite contact of contiguous particles, at the temperature of  $32^{\circ}$  (Fahr.), would coalesce into one continuous mass of transparent ice. The conclusion was tested by the following experiment:—

Two cubical blocks of seasoned boxwood had each a cavity hollowed out on one of its sides, such that when these two sides were placed in contact, the contour of the one cavity exactly corresponded to that of the other; and the two cavities together formed a lenticular vacant space between the two blocks of wood. A ball of ice was placed in this vacant space, not of the same form as the cavity itself, but of something more than sufficient bulk to fill it when forcibly pressed into it. The two blocks were then placed under a hydrostatic press, and a pressure applied to them sufficient to crush the ice and make it assume the form of the cavity in which it was placed. In this process the ice was of course broken into atoms; but when turned out of the mould, within the few seconds of time necessary for that operation, it had been *regeled* into a perfectly continuous and transparent lump of ice. The regelation appeared to have been effected almost at the instant that the crushing was completed.

This is the simplest form of the experiment, and exhibits most satisfactorily the result of the process which is called *regelation*. The ice is not squeezed like a soft substance, but cracked, split, and broken into thousands of pieces, which, brought into contact by the pressure, are again united into one continuous

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\* 'Glaciers of the Alps,' p. 361.

mass by the process of regelation. We are not here speaking of the nature of this process—of the molecular actions which may be involved in it. We are appealing merely to the *result* of that process as an observed fact; and the fact itself may manifestly be made the base of our speculations, without our knowing the *modus operandi* of the process, just as we may reason upon the facts or results of crystallization, notwithstanding our ignorance of the physical process by which those results are produced. We are the more anxious to point out this distinction because we imagine that we discern a disposition on the part of some glacialists, in the application of regelation to the explanation of the motion of a glacier, to depart from the *facts* or *results* of regelation, with which we are acquainted, to the *modus operandi*, with which we are not acquainted. The term 'regelation' has been objected to as seeming to indicate the nature of the process by which the effect above described is produced; but it must be distinctly understood that when we speak of the 'property of regelation' as characterising ice at the particular temperature of  $32^{\circ}$  (Fahr.), we mean simply that property in virtue of which ice at that temperature is capable of being broken and fractured, and instantly reunited into a continuous mass, as above described. We shall see in the sequel the great importance of this property of ice, in the theory of the motion of glaciers.

We may add that Dr. Tyndall has varied the above experiment in several ways, as may be seen by referring to his 'Glaciers of the Alps,' p. 346, or to his Memoirs in the Transactions of the Royal Society.

The *modus operandi* in the conversion of snow into the compact ice of the lower glacier, is intimately connected with the internal temperature of the mass. In the colder glacial regions the falling snow is usually dry, and consists of fine granules; but when the atmosphere is more moist, and its temperature little exceeds that of freezing, the snow is flocculent. During the winter a thick covering of snow is deposited on the glacier; but, below the snow-line, the whole of this snow, together with the superficial portion of the pre-existing glacier beneath it, is dissolved by the heat of the following summer. Above the snow-line, on the contrary, a part only of the previous winter's snow is dissolved, and the other part remains as a permanent addition to the glacier, thus forming an annual stratum which may or may not be afterwards recognisable as distinct from similar strata above or below it. When the summer warmth begins to predominate in these higher regions, the superficial snow is melted by the sun's rays, though the atmospheric temperature may be considerably below  $32^{\circ}$ . The water thus produced

produced sinks into the porous mass of snow, the temperature of which will necessarily be below—and in the highest regions considerably below— $32^{\circ}$  (Fahr.). This percolating water will therefore become partly frozen, as above intimated, the depth to which the infiltration proceeds depending on circumstances. The portion of the last winter's snow which remains at the end of the summer thus becomes changed into a granular mass, while the mass immediately below it will also be further modified in like manner. The more superficial portion of the whole mass thus transformed becomes granular, and is called *névé*; it becomes more and more consolidated as the depth increases, till it finally assumes the character of compact glacial ice. We should expect the mass thus formed to be stratified, but that its indications of stratification would be feeble. It is in this manner that the glacial mass increases above the snow-line, to compensate for the waste below it.

In the higher regions in which glaciers originate, the minimum superficial winter temperature will frequently be much less than that determined, as above stated, by M. Agassiz in the middle region of the Aar glacier, though the winter covering of snow will tend to equalise these temperatures in different localities. Whatever effect, however, may be produced by a lower atmospheric temperature in the higher glacial regions, the tendency of the infiltrated water, as above explained, must always be to raise the temperature to that of freezing in the lower and far greater part of the mass into which the winter cold never penetrates. Allowing this influence of infiltration, the lower portion of the glacial mass will have the same temperature in these higher and colder regions as in the milder middle and lower regions of the glacier; but the portion affected by the winter temperature will be generally colder and its depth greater where the mean external atmospheric temperature is the lowest, and especially in winter.

The conversion of snow into *névé*, and subsequently into consolidated ice, has been a subject of frequent discussion. The views of all the earlier glacialists, and of some also of the later ones, were founded on conceptions more or less erroneous respecting the internal temperature of glaciers. Pressure is a cause, as well as temperature, to which this conversion has been attributed (p. 78). M. Agassiz has described his experiments and stated his views more explicitly than any other glacialist in Chapter V. of his '*Système Glaciaire*.' He probably erred in attributing too much importance to the interior temperature. Principal Forbes, in his earlier speculations, appears to have recognised congelation, due to the winter temperature, as the effective cause  
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in producing the transmutation we are speaking of; but he afterwards rejected this idea, and adopted the opinion that it was due to pressure alone; for, in 1846, he writes, 'I am satisfied, then (and it is only after long doubt that I venture this confident expression), that the conversion of snow into ice is due to the effects of pressure on the loose and porous structure of the former.' To the operation of direct pressure he adds that of the 'kneading or working of the parts on one another,' due to a difference of motion of two contiguous particles and the consequent friction between them.

Dr. Tyndall has stated his views on this question in his 'Glaciers of the Alps' (p. 249-251). He appears to consider direct pressure as the principal cause of the solidification of the ice, aided, perhaps, by congelation in the colder portions of the mass.

None of these views appear to be sufficiently based on determinate conceptions of the interior temperature of the glacial mass. If the mean annual atmospheric temperature be several degrees less than  $32^{\circ}$  (Fahr.), the temperature during the later winter and earlier spring months will be considerably below the freezing temperature generally, at depths not exceeding that to which the winter cold is able to penetrate. In that part of the mass, therefore, congelation must necessarily attend infiltration, and must probably be a more efficient cause than pressure, which, in the more superficial portion of the mass, must be comparatively small. In its lower portion, on the contrary (if we allow the full effect of infiltration there), the temperature must be very nearly that of freezing, and congelation will proceed very slowly, while the pressure will become comparatively large and efficient. It appears to us that both the causes here spoken of must be effective, but more especially in different parts of the mass.

The process of regelation could not, of course, be even tacitly alluded to in any of the explanations above mentioned previous to that given by Dr. Tyndall, since he was the first to discover its importance in glacial questions; nor even in his own explanation do we see any explicit allusion to its probable efficiency in the consolidation of the névé into compact ice. But it does appear to us that it is by means of this process that pressure is enabled to produce a particular kind of consolidation in ice at the freezing temperature which it is incapable of producing at any lower temperature. In fact, we do not see how we can do otherwise than recognise the efficiency of this cause, so far as we recognise the temperature of  $32^{\circ}$  in the greater portion of the mass.

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When the glacial mass passes from the state of *névé* to that of the proper glacial ice, it does not necessarily become a homogeneous hard transparent mass, but is frequently found to consist of alternate layers of two apparently different kinds of ice, one of which is of a dark bluish colour, and transparent, the other of a dull white colour, and opaque. These layers usually vary in thickness from the fraction of an inch to one or two inches, or upwards. Their continuity is more or less perfect for considerable distances, and their position, in the great majority of cases in which their development is most complete, approximates to verticality. The colour of the whiter layers is found to be due to the presence of a great number of small air-bubbles contained in them; the blue layers derive their greater transparency from the comparative absence of these bubbles. The structure is usually designated as the *ribboned*, *laminar*, or *veined* structure of glacial ice. These laminæ appear to be developed as the ice consolidates from its state of *névé*, and may be regarded as a general property of the ice in its consolidated form, however different its development may be in different parts of a glacier, and however much that development may seem to depend on local conditions.

Whatever may be the physical cause of this peculiar structure, there seems to be no doubt of its being, in many cases, gradually developed during the transmutation of the *névé* into compact ice; and it appears to be equally certain that the structure, so far as regards the positions of the bands and their degree of development, may be suddenly and entirely changed when the cause producing the change is sufficiently energetic. The most complete proof of this latter statement is found in the structure immediately at the bottom of the ice-falls which form such striking features in the external aspect of a glacier. The structure in such localities is always finely developed, the veins are nearly vertical and transverse, their intersections with the surface of the glacier running nearly in straight lines across it, in directions perpendicular to its axis. This appears to be universally true, whatever may have been the degree of development of the structure, or the positions of the veins in the glacier immediately above the fall. There can be no doubt, therefore, as to the structure originating at the bottom of the fall, so far as it is distinguished by the characteristic positions of the veins as above described. When we examine the glacier at points more or less remote from the fall, we find the nearly straight transverse lines of structure converted into elongated loops, with their vertices directed towards the lower end of the glacier, and the question arises whether these loops are the original transverse lines of structure,

ture, distorted into lengthened curves by the more rapid motion of the axial portion of the glacier; or whether they are altogether new structural lines resulting from the action of causes similar to those at the foot of the fall, their effects being modified by the change of conditions under which they act? This is a question which we shall discuss in the sequel. It may here be sufficient to remark that the positions of the veins and structural curves on the face of the glacier are generally such as might be anticipated, supposing them to be transmitted from the locality in which they originated, but to be elongated and deformed, as above described, by the unequable motion of different parts of the glacier.

In a canal-shaped glacier the elongated curves of structure will thus become more nearly parallel to the sides of the glacier in its marginal portions, as they move onward from the fall. Dr. Tyndall has appropriately designated the structure in those portions, the *marginal structure*. The laminar structure is also strongly developed on large glaciers beneath their central moraines, which arise, as above explained, from the junction of two of the lateral moraines of two large tributaries, as on the glacier of the Aar. In such cases the veins are vertical and longitudinal, and such as would result in the united glacier from the marginal veins of the tributaries, when those veins should be nearly parallel to the sides of their respective tributaries. This has been called the *longitudinal structure*. From the foot of the great fall of the Rhone glacier, and in some other glaciers, the forms of the valleys are such that the ice moves from them in radiating lines, and the curves of structure consequently expand into curves of an approximately circular form. Most Alpine travellers will have remarked the striking feature they form on the glacier of the Rhone, between the fall and the terminating circular contour of the glacier. The Mer de Glace is also one of the well-known glaciers which exhibits the different varieties of this structure in great perfection.

We have already indicated the way in which the névé may become more or less distinctly stratified, and all glacialists probably agree in the belief that stratification may be frequently recognised in that portion of a glacial mass. There has been, however, great difference of opinion as to the permanence of any visible stratification in the consolidated ice of the lower portions of glaciers. M. Agassiz regards it as a permanent and pervading character of all glacial ice, derived from the original stratification of the névé. Principal Forbes, on the contrary, considers it to exist only in the névé, all indication of it disappearing in the true glacial ice. He cites the Talèfre glacier in support of his assertion. But these two observers did not agree as to what appear-

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ances were to be regarded as really indicative of stratification. Dr. Tyndall refuted Principal Forbes's opinion by the discovery in several localities of the coexistence of stratification and a well-developed veined structure in the same mass. It should, however, be remarked that, after diligent search on the glaciers of Mont Blanc and Monte Rosa, he found comparatively few instances of this coexistence; and the inference from the observations of the two last-named glacialists would seem to be, that though the two phenomena in question do sometimes coexist in the same mass, the external proofs of their coexistence are comparatively rare. M. Agassiz's views on this subject are more complicated. We shall recur to them shortly.

We may now direct attention to certain bands, called *Dirt Bands*, which have been remarked on the surface of a few Alpine glaciers, and which appear to be in some way associated with the laminar structure just described. They form elongated loops, similar to the above structural curves, defined by a slight dirty tint, very feeble, but sufficient, when seen under favourable circumstances, to distinguish them from the whiter intervening spaces. Their darker colour is caused by a small quantity of sand and dirt spread along them on the surface of the glacier. They were first observed and described by Principal Forbes on the Mer de Glace. He was able to enumerate eighteen of them between Trélaporte and the lower extremity of the glacier, with the average distance of about 700 feet between their vertices, measured along the axis of the glacier. Sixteen or seventeen years afterwards Dr. Tyndall recognised the same number within the same limits; whence we may infer that this mean distance between them is determined by some law, and not by merely accidental circumstances.

It is to the two observers above mentioned that we owe our principal knowledge of these bands on the Mer de Glace. Principal Forbes supposes the glacier to consist of alternate portions of more and less porous ice, each portion being bounded by an internal surface which coincides with a surface of one of the laminae of the veined structure, and that the bands arise from the fact that the dirt, diffused by the winds or other superficial causes over the surface of the glacier, adheres to the porous more than to the harder portions of the ice. The defect of this view is that it leaves the hypothesis of the alternate occurrence of zones of greater and less porosity entirely unsupported by observation or theory. It amounts to little but the assertion of the fact of the coincidence of the bands and superficial curves of lamellar structure.

At the foot of the ice-fall of the glacier du Géant, Dr. Tyndall found



found these bands restricted to the ice which had been precipitated down the fall. He observed there also a number of large transverse ridges \* or *rucks* of the glacier, which Principal Forbes seems also to have observed,† and which he appears to refer, as we think, to their right mechanical cause—a periodical augmentation of the enormous pressure *à tergo* arising from the more rapid flow of the ice down the fall when liberated by the approaching warmth of summer. Dr. Tyndall also observed that snow was still remaining on the sides of those ridges least exposed to the sun's rays, and that this snow was the receptacle of a considerable quantity of dirt conveyed thither by external causes, and retained by the snow, to be finally deposited on the surface of the glacier. He regards the porosity of the ice immediately beneath the bands as merely superficial, and to be the effect of the bands, and not their cause, as asserted by Principal Forbes, being produced, he supposes, by the sinking down of the particles of dust into the surface of the ice, in consequence of the greater heat which they imbibe from the sun's rays.

Dr. Tyndall's theory of these bands requires confirmation by more extended observation, but it involves no difficulty which appears to us at present so great as that involved in Principal Forbes's hypothesis of the existence of alternate zones of more and less porous ice in the glaciers in which these bands are observed.

Both these theories of the dirt-bands involve the superficial origin of the dirt which colours the bands, and are in this respect opposed to the views of M. Agassiz, so far, at least, as we comprehend those views. The latter glacialist appears to refer most of the alternating bands or laminæ of blue and white ice, above described as the veined structure, to the original stratification of the *névé*. He states, as the result of observation, that many of the stronger blue veins in the consolidated glacial ice are accompanied by fine particles of sand and dirt which lie intermediate to those veins and the contiguous whiter ones. He seems to conceive the veins thus distinguished to be derived from the stratification of the *névé*, of which, in fact, they are to be regarded as the continuation into the compact ice of the middle and lower glacier. So far, too, as we understand our author, the laminæ of blue and white ice intermediate to the stronger laminæ above mentioned, belong also to the stratification which he represents as pervading the whole mass of the glacier. He regards the real veined structure as a comparatively superficial and local phenomenon,

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\* 'Glaciers of the Alps,' p. 369 *et seq.*

† 'Occasional Papers,' p. 40 (1844).

in which the laminae may or may not coincide with those layers which he asserts to belong properly to the stratification ; but we are unable to see any distinct cause to which the real veined structure, according to his views, is to be referred. Again, the author of this theory is bound to explain how the original strata of the névé could assume the varied but regular positions of the blue and white veins in the lower parts of the glacier, and especially the transverse and vertical position which they uniformly assume at the foot of an ice-fall, after the ice has been broken into innumerable fragments. In all this the failure is so manifest as to be condemnatory at once of the theory. We may, however, remark that the facts respecting the re-formation of the laminar structure at the foot of an ice-fall were then far less perfectly known than at the present time. Still, the confusion and inadequacy of the generalizations and conclusions appear to us to be inconsistent with the care and detail with which the observations themselves were evidently made, and also with the care with which many of the curves of structure are delineated by trigonometrical admeasurements on the map of the Aar glacier contained in the Atlas which accompanies the *Système Glaciaire*. It is very desirable that that glacier should be again carefully and impartially examined in reference to its laminated structure, with the additional light which has been thrown on the subject since the period when M. Agassiz's observations were made. Those observations were evidently conducted with great care, and might, we doubt not, be brought into harmony with the observations of other glacialists, instead of standing, as they do now, in perplexing antagonism to them, both as to facts and as to interpretations.

We have already alluded to the experiments on infiltration, made respectively by M. Agassiz and Professor Huxley. The former states that he had ascertained by observation that the coloured infiltrating fluid passed through the compact ice in which he conducted his experiments, *entirely along the capillary fissures* (*Système Glac.*, p. 173). These fissures are described as dividing the mass into small angular fragments, without any recognizable order of form or arrangement (p. 163) ; and it is stated that when a lump of ice from the interior of the glacier was exposed to the external atmosphere, it was easily disintegrated by the separation of these angular fragments from each other. It is to the absence of all regularity in the forms and relative positions of these fragments that we would here more especially direct the attention of our readers, as indicating the absence of all tendency in the general mass to yield in one direction more than another to any forces which may be exerted to tear and rupture it

it by extension. This conclusion is important as regards the theories of glacial motion which we shall have to discuss. So far as relates to those parts of a glacier in which, according to Prof. Huxley, no infiltration takes place, and in which, therefore, there can be no such fissures as are here contemplated, the same question as to the difference of cohesion in different directions cannot arise, unless it should be that certain determinate planes of crystallisation may give a predominant tendency to the mass to cleave in some particular direction. We cannot ascertain, however, that any such tendency has been detected in ice; and we may the less expect it to exist in glacial ice than in any other, from the manner in which that ice passes by a gradual process of consolidation from snow to the compact ice of the lower glacier. It may also be remarked as somewhat singular that glacial ice, even where the veined structure is most completely developed, should indicate no tendency, while unweathered, to cleave along the veins rather than in directions transverse to them.

M. Agassiz also made a number of experiments and observations respecting the interior structure of glacial ice;\* and Dr. Tyndall has subsequently made somewhat similar experiments on common or lake-ice.† Such experiments are highly interesting to the physicist, but at present they seem to have too uncertain a bearing on our glacial theories for the critics of such theories to dwell upon them, even if our space would admit of our doing so. We would only remark that these experiments reveal nothing, especially in reference to glacial ice, to justify the inference of there being any of the greater tendency above alluded to, to cleave in one direction rather than another.

Before we discuss the different theories which have been propounded to account for the observed motion of a glacier, it will be necessary to define accurately what we mean by the *viscosity* or *plasticity* of a body, since this property has been especially appealed to in the glacial theory which, till a late period, occupied so large a share of public attention in this country. It will be understood that we allude to the *Viscous Theory*. And here we may first premise that all exact definitions of such terms as *solidity*, *viscosity*, *fluidity*, *elasticity*, and the like, must necessarily be *mechanical*, since all the properties of bodies denoted by such terms indicate a power, greater or less, of resisting the tendency of external forces to change the form of a body, or, what is equivalent, to change the relative positions of its com-

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\* 'Système Glaciaire,' p. 163 *et seq.*

† 'Glaciers of the Alps,' p. 354.

ponent particles with reference to each other. Again, we can pursue no exact reasoning, and make no accurate calculations in which the properties here spoken of are involved, without some determinate *measures* of those properties, and such measures can only express the mechanical capability which the body may derive from each of them, to resist a given amount of force acting under given conditions—i. e., the measures of these properties, as well as their definitions, must be *mechanical*.

We may also here remind our readers that a body or mass of any substance is said to be in its natural state, or in a *state of no constraint*, when it is acted on only by the mutual attractions of its component particles, and not by any extraneous forces whatever. Extraneous forces tend, of course, to move a body from one position in space to another; but that is a fact with which we are not here immediately concerned. Another effect is to change the form of the body, and thereby to bring it into a *state of constraint*; and when spoken of with reference to this effect, these forces are frequently termed *constraining forces*. Again, when a body is held by extraneous forces in a state of constraint, certain internal or molecular forces are called into action, by virtue of which the body has a tendency to regain its natural form, and will regain it more or less completely if the constraining extraneous forces be removed. These internal molecular forces may be conveniently designated as *forces of restitution*. Thus if a body be extended or compressed in any directions, or twisted and contorted, corresponding forces of restitution, of greater or less magnitude, will be called into action, tending to restore, in a greater or less degree, the unconstrained form of the body. In such a case the body is said to be more or less *elastic*, the *elasticity* called into action in each case being measured by the greater or less tendency of the body to recover its original form. Certain substances exert a great force of restitution whenever they are deformed or placed in a state of constraint, whether by extension, compression, or torsion. Such bodies are said to have great *elasticity*; and when, moreover, they require a very large force to fracture them by extension, or crush them by compression, they are called *solid* bodies. If the force required for this purpose should be indefinitely large, the body would be said to be *perfectly rigid*; but this is a state to which bodies in nature can only approximate, but never attain. In solid bodies, too, the *cohesive power* to resist extension or tension, and the *resisting power* to resist compression, must, from the above definition, be great; and the *extensibility* and *compressibility* will be small.

Again, we may conceive the form of a homogeneous substance to

to be altered without altering its volume, and so that its specific gravity shall remain uniform and unaltered. In such case, if no force of restitution, or, therefore, no elasticity be called into action, tending to restore the substance to its original form, the body is said to be *plastic*. Such bodies may possess great power of resistance to any compression of their volume, but have usually a small cohesive power. The distinctive character is, that they will retain any arbitrary form which may be given to them consistently with the preservation of their volume and uniformity of their specific gravity. Thus a lump of clay sufficiently softened by moisture, or a piece of wax sufficiently softened by heat, are *plastic* substances. The essential definition of *viscosity* is the same as that of plasticity, except that the term is usually applied to substances which approximate more nearly than plastic bodies to a state of fluidity. Thus, if the wax cited as a plastic body were still further softened by heat, it would be called viscous rather than plastic. In both cases the constituent particles are moveable *inter se* without changing the whole volume of the substance, or necessarily exciting any force of restitution; but in bodies termed viscous there is less cohesive power than in those usually termed plastic, and consequently the molecular relative displacements are more easily effected.

A substance like india-rubber may be cited as having a property intermediate between solidity and plasticity. When it has been extended, compressed, or angularly contorted, it will return, after the removal of the constraining forces, almost exactly to its original form—i. e., its *elasticity* is great, and so far it resembles a solid body. On the other hand, its *extensibility* is great, and it might seem in this respect to approximate more to a plastic than to a solid body. Its great elasticity, however, destroys all approximation to real plasticity. Such a substance is more conveniently designated as an *elastic body*, the term *elastic* being here understood to indicate the combination of great elasticity with great extensibility or compressibility.

The importance of exact definitions of such terms as solid, plastic, viscous, &c., can only be understood when we come to analyse and compare the different theories of glacial motion. But before we proceed to the review of that part of our subject, it will be desirable to recapitulate the principal observed facts respecting the motion of glaciers.

It has been already stated that all primary glaciers move onwards with a slow but persistent motion. This general fact was known to the earlier glacialists; but it is to later observers, especially to M. Agassiz and Principal Forbes, and more recently to Dr. Tyndall, that we owe our detailed knowledge of the motion  
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in question. We can here do little more than state the principal results arrived at, and make a few remarks on points of precedence of observation and other collateral matters which fall more, perhaps, within the province of the critic or historian of science, than in that of the scientific philosopher. The principal observed facts respecting the motion of primary glaciers are the following :—

1. In an elongated glacier the axial portion moves faster than its marginal portions, as above stated ; but the point of maximum velocity in a line perpendicular to the axis of the glacier, though usually near to the axis, is frequently not upon it. When the course of the glacier, for instance, curves more rapidly than usual to the left, the point of maximum velocity will be thrown towards the right side of the glacier, and *vice versâ*. Also the velocity along the line of maximum velocity varies at different points, according to local circumstances of the inclination of the valley, its width, or particular impediments. On the Mer de Glace it seems to vary generally from about 20 inches a day in the higher portion to about 30 inches in the lower part of the glacier.

2. The ratio which the velocity in the extreme marginal portion bears to the maximum velocity in the same transverse section is very variable. On the Mer de Glace it appears to vary in many places from about one-third to one-half. In particular localities, however, it may be much less, in consequence of local obstacles along the sides ; but in such cases the marginal portions are much broken and fissured transversely. At no great distance from the lateral boundaries of the glacier, the motion usually becomes much more equable.

M. Agassiz has given an account, in chap. xii. of his '*Système Glaciaire*,' of observations which he made on the Aar glacier by means of a great number of stakes placed originally in a straight transverse line across the glacier, the positions of which were observed for three or four successive years. The curves assumed in these different years by the straight line on which the stakes were originally placed, are delineated, on the beautiful map contained in the Atlas accompanying the above work. The motion of the mass is thus presented, as it were, to the eye. We would also refer our readers to the account which Dr. Tyndall gives in his '*Glaciers of the Alps*' of similar observations made at six or seven places entirely across the Mer de Glace. Principal Forbes likewise made a number of more insulated observations on different glaciers, showing the generality of the law above stated respecting the relative velocities of the axial and marginal portions of the glacier ; but we are not aware of his having made observations at a number of points, in any locality, extending  
entirely

entirely across a glacier, as in the observations of M. Agassiz and Dr. Tyndall.

3. A primary glacier slides over the bed of the valley containing it.

4. As the axial portion of a canal-shaped glacier moves faster than its lateral portions, so the superficial portion moves faster than the lower one.

When Principal Forbes first put forth his Viscous Theory, he manifestly regarded that part of the motion of the whole mass which depends on the *sliding* of its lower surface as insignificant (if, indeed, it existed at all) compared with the excess of the motion of the upper surface over that of the lower one, or that due to the *pliability* (p. 82) of the mass, to whatever cause that pliability might be due. Others, on the contrary, while admitting both the sliding and the pliability as *veræ causæ*, thought that the former was probably more efficient than the latter, and urged the necessity of determining their relative influences by actual observation.\* The first observation for this purpose was made by Principal Forbes at the terminal face of the Glacier des Bois, at Chamouni. He found that, of the whole motion of the upper surface of the glacier, the part due to the *sliding* of the mass was rather more than one-half; that due to its *pliability* being consequently rather less than one-half.† Dr. Tyndall, by similar observations, in 1857, on the flank of the *Glacier du Géant*, obtained the result that the latter of the above causes was there somewhat more efficient than the former. The mean of these results would assign nearly an equal efficiency to each of the causes above mentioned.

The important fact, however, that glaciers do slide is not dependent alone on this limited evidence; for every valley which we believe to have been a glacial valley either in remote or more recent periods, bears evidence, in the striated and rounded surfaces of its rocks, to the sliding of the glacier formerly contained in it. Exactly such are the striating and rounding effects that recent glaciers are producing, and no glacialist, we imagine, now doubts the sliding motion here asserted.

5. The motion continues during the winter, but is slower during that season than during the warmer months of summer. The clearest observations we have on this subject are those made by Dr. Tyndall at midwinter on the Mer de Glace, and described in his 'Glaciers of the Alps,' p. 294.

The observations by which the greater relative velocity of the

\* 'Phil. Mag.' 1845. Mr. Hopkins's third letter on the 'Motion of Glaciers.'

† 'Occasional Papers,' p. 173. It may appear singular that Principal Forbes never referred to this result except as a proof of the viscosity of glacial ice.

axial parts of a glacier was determined, did not certainly involve much ingenuity either in their conception or execution. Still, the fact is a cardinal one in the motion of a glacier, and this is probably the principal reason why the claim of precedency in the mere fact of making these observations has been sometimes insisted on with undue urgency. In this country Principal Forbes, whatever might be the reason, was generally regarded as the first who determined explicitly by observation the true relative velocities of which we are speaking, while M. Agassiz was scarcely considered to have had any share in the matter. Under these circumstances, Dr. Tyndall did nothing more than simple justice to the latter observer, in making known the facts of the case to English readers. We quote Dr. Tyndall's own words:—\*

'The facts, then, so far as I have been able to collect them, are as follows:—M. Agassiz commenced his experiment (for determining the relative velocity in question) about ten months before Professor Forbes, and the results of his measurements, with quantities stated, were communicated to the French Academy about two months prior to the publication of the letter† of Professor Forbes in the "Edinburgh Philosophical Journal." But the latter publication, in announcing in general terms the fact of the speedier central motion, was dated from Courmayeur twenty-seven days before the date of M. Agassiz's letter from the glacier of the Aar.'

Should our readers be in the humour to compare small things with great ones, they will see in the case just stated an analogy with that of the predictions of a new planet by M. le Verrier and Professor Adams. The latter was the first to make the prediction; the former was the first to publish it. The scientific world has justly refused to give exclusively to either of these astronomers an honour to which the other had an equal claim. The same kind of equal justice will be done, we doubt not, to the glacialists of whom we have been speaking.

A glacier presents to us a great physical problem in its first formation, in the peculiar characters of glacial ice, and in the transformations which it undergoes between the first conversion of the matter composing it into snow, and its final reconversion into water; and it also presents to us a great mechanical problem in the phenomena of its motion. The majority of glacialists, even in recent times, have probably been interested in the subject more on account of the physical than the mechanical questions involved in it; and it may, perhaps, be asserted as probable that the principal importance which has been usually attached to the

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\* 'Glaciers of the Alps,' p. 273.

† 'Occasional Papers.' Letter dated July 4, 1842, p. 9.



latter questions has been found in regarding them as subservient to the physics of the subject, rather than in the solution itself of a great mechanical problem which Nature here presents to us. This preference would seem to us to be associated—partly, perhaps, as a cause, and partly as an effect—with the fact that few persons previously versed in abstract mechanics have directed their attention to glacial phenomena. A great number of observations have been made on the motion of glaciers, but there are very few glacialists who have professedly regarded the subject under its mechanical aspect, and endeavoured to bring to bear upon it the fundamental principles, with the exact reasonings and methods, of mechanical science. This led to loose and inaccurate methods of treating the mechanical problems of the subject, and to fundamental hypotheses too indeterminate to be made the foundation of a sound glacial theory. But, some years ago, the Viscous Theory, as it is termed, was received with that degree of confidence which scarcely admitted, without manifestations of impatience, the claims of free discussion, though still a certain number of scientific men always regarded it with that reserve which has been since, as we conceive, well justified by the discovery of regelation. It was this important discovery which aroused many glacialists to the conviction that glacial theory might be made to rest, not on an unproved hypothesis like that of the viscosity of glacial ice, but on the results of accurate experiment and exact investigation.

It has already been stated that Grüner was the first to suggest that the motion of a glacier was due simply to gravity, which urged it down the valley containing it, as it urges the descent of a body in ordinary cases down a plane sufficiently smooth and sufficiently inclined to the horizon; and, moreover, that this view obtained a considerable circulation in consequence of its adoption by De Saussure, with whose name it became associated under the appellation of the *sliding theory* of De Saussure, though he neither seems to have made any material addition to it nor to have removed the difficulties which it appeared to involve. Nearly forty years afterwards, several Swiss observers directed their attention to glacial phenomena, after the subject had remained nearly dormant for a considerable period. They rejected De Saussure's theory in favour of what was called the *Dilatation Theory*, according to which a glacier was propelled onwards by the expansion of its mass due to the freezing of the water contained in its internal pores. It is now entirely exploded, as being inconsistent with the interior temperature of a glacier, and as leading to a resulting motion not in accordance with that now established by observation. A few years after, Principal Forbes proposed

proposed his *Viscous Theory*, which, after reigning dominant in this country for fifteen or sixteen years, has recently had to submit to the rivalry of a theory which distinctly recognises the sliding of glaciers, and is based on the property of *regelation* instead of that of *viscosity*, on which the Viscous Theory was made to rest. We shall principally direct our attention to the two last mentioned of these theories.

The two leading objections against the sliding motion of glaciers were (1) that it appeared impossible that a solid glacial mass should slide at all down an irregular valley of which the inclination to the horizon should not exceed  $3^{\circ}$  or  $4^{\circ}$ ; and (2) that if the mass were once to begin to move in that manner, it would necessarily move, like any other body descending an inclined plane, with an accelerated motion, and be finally projected from the mouth of its mountain valley, like an avalanche, into the plain beneath.\*

These objections were apparently very formidable. The following simple experiment was devised to test their real weight:—

‘A mass of ice was placed on a flat rough slab of sandstone, so arranged that it could easily be placed at any proposed inclination to the horizon. When the inclination was about  $20^{\circ}$ , the ice descended with an accelerated motion, as in ordinary cases; but at smaller inclinations it descended with a *slow uniform motion*, which, for inclinations not exceeding  $9^{\circ}$  or  $10^{\circ}$ , was, *cæteris paribus*, *proportional to the inclination*. The velocity was increased by an *increased weight*.’ †

The motion was sensible, it seems, for an inclination of not more than half a degree, and would doubtless have been so, especially with an increase of the weight, for still smaller inclinations. The motion was due to the melting of the ice immediately in contact with the slab, for when the temperature of the air was below  $32^{\circ}$  (Fahr.) the motion was no longer sensible.

The difference between this case and the ordinary case of motion down an inclined plane, with which it has been confounded, may be easily explained. In the latter case the retarding force of friction is found experimentally to be independent of the

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\* Principal Forbes expresses these objections in much the same form as in the text. He says: ‘The main objection, however, is this, that a sliding motion of the kind supposed, if it commence must be accelerated by gravity, and the glacier must slide from its bed in an avalanche. The small slope of most glacier-valleys and the extreme irregularity of their bounding walls are also great objections to the hypothesis.’—‘Occasional Papers,’ p. 249; also published in 1855 in the ‘Encyclopædia Britannica.’

† Memoir ‘On the Theory of the Motion of Glaciers,’ ‘Transactions of the Royal Society,’ read May 22nd, 1862. Also the ‘Phil. Mag.’ for January, 1845, and the ‘Transactions of the Cambridge Phil. Soc.,’ 1847.

velocity;

velocity; provided always the two surfaces in contact are strong enough in their texture not to be injured by the pressure and friction between them, or by any other cause. Now, in the case of the glacier, we have explained that the temperature at its lower surface must be  $32^{\circ}$  (Fahr.), or that at which the ice there must be in a state of slow dissolution, as the necessary effect of the heat supplied from the earth beneath it. Hence, at the instant when an indefinitely thin stratum of ice at the lower surface is melted, the glacier loses its hold on its rocky bed, and is impelled by its own weight to move by an indefinitely small step onwards. It is then again obliged to wait, as it were, till the next indefinitely thin layer is melted, and so on for the consecutive steps of its motion, which, the successive intervals being infinitely small, becomes the uniform motion of the mass. The proper dynamical analogy is derived from the descent of a body in water. The body soon acquires such a velocity that the retarding force of the resistance of the water becomes equal to the accelerating force of gravity, and the body then begins to move uniformly with the velocity acquired. This velocity is called the *terminal velocity*. The uniform velocity of the glacier is its terminal velocity. The details may be seen in papers referred to in the second footnote of p. 106.

It appears from the experiments just described that the velocity of the sliding mass was increased, *cæteris paribus*, by increasing its weight,—i.e. the force urging it forwards was thus increased more than the resistance to the motion. Now, if any local obstacle should be opposed to the motion of a glacier, the mass would accumulate behind the obstacle; and it follows from what precedes, that the force urging the glacier forwards would be increased by the additional weight more than the resistance of the obstacle would be increased by the additional pressure or friction upon it produced by the accumulated mass. Consequently, supposing the supply of ice from the source of the glacier to be, as it is, unlimited, the glacier must, in the course of time, overcome the obstacle opposed to it, as certainly as that a river would ultimately overcome any local dam opposed to its progress. The same argument might be urged if the glacier were frozen to its bed; but since the adhesion of the particles of the ice to the bed of the glacier is undoubtedly proved by the preceding experiments to be far less than their adhesion to each other, the accumulation required in the case now supposed would probably be immensely greater than in the actual case in which the action of the bed of the glacier exercises so little power upon it to arrest entirely its motion.

We may state that the glacial mass is here supposed to have  
a degree

a degree of pliability which enables it to adapt itself to the different dimensions of its valley ; but so far as the above results are concerned, it is immaterial whether the pliability be derived from actual breakings, crackings, and regelation, or from any, assumed viscosity.

We can thus account then demonstrably for that part of the motion of a glacier which depends on its sliding over its bed ; and, to obtain the whole motion, we have to add to this part of it the motion which results from the pliability of the aggregate glacier. Admitting this property, we at once deduce from it, without any particular calculation, the more rapid motion of the axial part of the glacier compared with its marginal parts, and that of the upper as compared with the lower surface of the mass. To this extent the problem presents no difficulty, and we have not *data* sufficient to work it out more completely. The real stumbling block in the theory has consisted in the apparent impossibility of reconciling this pliability of the aggregate glacier with the obvious characters of hardness and brittleness which belong to compact glacial ice. It is manifest that in consequence of the motion of a glacier, as above described, some parts must be extended, some compressed, and others distorted in a degree apparently quite inconsistent with the hard, crystalline structure of ice, and the preservation of its continuity. It is in the explanation which is given of this difficulty that the fundamental difference between the *Viscous Theory* and that which we may term the *Sliding and Regelation Theory* consists.

The question was answered according to the Viscous Theory, by the bold assertion that ice was really viscous. It was very difficult to ascertain without ambiguity what distinct property of matter was indicated by the term *viscous*, for no definition was ever given of it ; but it is certain that those who accepted the theory generally understood the term in question in the sense in which it is ordinarily applied to tar, treacle, soft wax, and such like substances, to which it is strictly applicable according to the definition we have given of it above (pp. 99-101). It could only be in this sense, too, that it could be received by those who regarded the theory of the viscosity of ice as one of those truths which are caught by the eye of genius long before they become visible to the vulgar eye. Still the explanation given, as far as we can understand the subject, appeared to be little more than that glacial ice, in the mass, was pliable because it was viscous, and viscous because it was pliable. It was to be expected that many would object to a theory which assigned the pliability of a glacial mass to no distinctive property of matter which the author of the theory could define, and who believed that some peculiar  
property

property of ice remained to be discovered which should afford a more intelligible explanation of this pliability than the vague and misty one which was put forward by the Viscous Theory. It would seem impossible to deny that this expectation has been fully justified by the discovery of that very distinctive property of ice at the freezing temperature, which enables it, after being crushed to a fine powder, to resume its original texture and character of a transparent and continuous crystalline substance, as above described.

Principal Forbes must necessarily have been aware of the accusation of vagueness under which the Viscous Theory always laboured, and it is much to be regretted that he did not avail himself of the opportunity afforded by the publication of his 'Occasional Papers' to remove all ambiguity in his fundamental definitions. But instead of this we find the following remarks, intended as an appeal to the reader in favour of the Viscous Theory,\* in which the Principal claims the credit of having laid the foundations of a *true theory* of glaciers, provided we admit the following postulates: 'First, that the limited plasticity of ice, which, when ice is exposed in the glacier to a peculiarly violent strain, necessitates the formation of an infinity of minute rents, is really a part of the Viscous Theory.' But the kind of cracking and fissuring here intimated appears to us to belong to what can only, with any regard to the accuracy and distinctiveness of scientific language, be called *solid* bodies. If the term *plastic* (which appears to be now preferred to *viscous*) were to denote a property of substances which yielded in the manner implied in the above quotation, the whole crust of the globe might, in the same sense, be said to be plastic. In that sense it designates no distinctive property of ice, or of any other substance. Secondly, our author requires us to admit, for the establishment of his claim, 'that the reconsolidation of the bruised glacial substance into a coherent whole may be effected by pressure alone acting upon granular snow, or upon ice softened by imminent thaw into a condition more plastic than ice at a low temperature, and that the terms "bruising and attachment," "incipient fissures reunited by time and cohesion," were equivalent in 1846 to the phrase "fracture and regelation" applied in 1857.' But here it must be remarked, that the bruising and breaking of the glacier was obvious to every one, as well as its reunion into a continuous mass; but many refused to believe that this reunion took place either in consequence of the property of viscosity in ice, or as the

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\* The whole passage will be found in the Introduction to 'Occasional Papers,' p. xvi.

mere direct effect of pressure acting for lengthened periods of time. In fact, it was proved by Mr. Faraday\* that pressure is not necessary for this reunion. Intimate *contact* is the essential condition, pressure being required in the ordinary cases of glaciers to produce that contact, as well as in experiments like Dr. Tyndall's, where the reunion is to be effected between a very large number of very small angular fragments, among which the contact required to produce a regelated *continuous* mass can manifestly be practically obtained only by a sufficient amount of pressure. Nor is *time*, in the sense in which it must be understood, we conceive, in the above quotation, required for this reunion, whether the fissures be great or small, for the process is shown to be sensibly *instantaneous*. How then are we to concede the points demanded by the author of the Viscous Theory? If there be more cogent reasons for allowing them than we can find, it would, we think, have been more conducive to the establishment of the truth to state them explicitly, than to leave others what we believe to be the hopeless task of discovering them.

Let us now consider somewhat more in detail the manner in which the internal constraint of a glacial mass, considered as a hard and brittle *solid*, may be relieved consistently with the sensible preservation of its continuity. For the more simple elucidation of the problem, conceive a rod of any material which is solid, according to our previous definition of the term, and suppose it to be acted on by two equal stretching forces at its two extremities and in the direction of its length, and by equal compressing forces at opposite points along its sides, and in directions perpendicular to its length. The beam will remain in equilibrium, but will be slightly elongated and transversely compressed. If these forces continue to act, and the stretching force be sufficient to overcome the cohesion, the beam will soon become so elongated that minute disruptions of its continuity will take place, as a consequence of its extension, so that it will be on the point of being torn asunder. But before the actual dislocation should be completed, let us conceive some physical cause to be called into action which should instantly restore the continuity of the rod and the original state of its molecular constitution, so that if the stretching force were removed, the rod would have no tendency to return to its original length. That force, however, being continued, instead of immediately breaking the rod, will, on account of the supposed reconstruction of the molecular constitution, produce another elongation in it similar to the first; and thus, by successive elongations and reconstructions,

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\* 'Glaciers of the Alps,' p. 351.

we may suppose our rod, though formed of a *solid* material, to be indefinitely elongated without being broken asunder, precisely *as if* it were perfectly plastic.

Now, there is only one solid substance known for which this continued alternate breaking and reconstruction of continuity and structure are possible; and there is only one condition under which this alternate process is possible with that particular substance. The substance is ice; the condition is, that its temperature must be  $32^{\circ}$  (Fahr.); and the process of reconstruction is that of which we denote the result by regelation. We consider our imaginary beam analogous to the ice of the glacier. The latter is broken by extension, or its structure may be broken down by compression, but the continuity and structure rise again, restored by regelation.

This explanation completely reconciles the pliability of the glacial mass with the obvious brittle and unyielding character of a hard specimen of glacial ice, by means of an experiment entirely independent of all glacial accumulations of ice, or of the phenomena attending them, and proving the existence of a peculiar and distinctive property of ice, on which the whole explanation rests. The Viscous Theory only explains the difficulty by an appeal to the phenomena which constitute the difficulty itself.

Most of our readers will be aware that there has been of late considerable discussion respecting the priority of the recognition of that *pliability* of glacial masses of which we have been speaking. M. Rendu, the late Bishop of Annecy, wrote an essay on the 'Théorie des Glaciers de la Savoie,' which was printed in Vol. X. of the 'Mémoires de la Société Royale Académique de Savoie, 1841.' Principal Forbes has made not unfrequent references to this essay, but it still remained till recently almost unknown to the glacialists of this country. It was not so much from any incompleteness, we conceive, in these references, as from the fact of most of the quotations being insulated from each other, that they entirely failed to convey to the reader any adequate idea of the essay itself; and it was not till the publication of Dr. Tyndall's 'Glaciers of the Alps' that it became at all appreciated in this country. More copious extracts from it than had before appeared are given in this work, and what is, perhaps, equally important, they are given in more continuous order,\* and not in that insulated form in which they had previously appeared. In this essay it is clearly seen that the author had formed a distinct conception of the unequable motions of different parts of a glacier; of its accumulation in particular loca-

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\* 'Glaciers of the Alps,' p. 299.

lities, and its attenuation in others; and, in fact, of all the principal phenomena which indicate a certain pliability in the general glacial mass, sufficient to enable it to mould itself to the local and temporary conditions to which it may be subjected, and to flow on in a manner analogous to that of a river. In Chap. VIII. he remarks:—

‘Il y a entre le Glacier des Bois et un fleuve une ressemblance tellement complète qu’il est impossible de trouver dans celui-ci une circonstance qui ne soit pas dans l’autre. Dans les courants d’eau la vitesse n’est pas uniforme dans toute la largeur ni dans toute la profondeur; le frottement du fond, celui des bords, l’action des obstacles font varier cette vitesse, qui n’est entière que vers le milieu de la surface.’

Again, the author says (Chap. X.):—

‘Je l’ai dit, les glaciers d’écoulement sont des fleuves d’eau solide; tous les phénomènes des fleuves s’y retracent avec une fidélité qui suffirait pour faire soupçonner leur usage: ils s’élargissent ou se rétrécissent selon la nature des bords.’

Few persons, we imagine, after reading these simple quotations, will doubt the priority of M. Rendu in the recognition of the fact that the motion of a glacier was analogous to that of a river. But it may be said, and something of the kind has been asserted, that this recognition was little more than a vague idea in his mind, which probably never assumed a form sufficiently definite to make it worthy of notice. If it had been so, and he had speculated no farther without seeing the formidable difficulty which had to be encountered in any attempt to reconcile the rigidity of ice with the pliability of a glacier, it might perhaps have been justly said that he had made only an accidental and faltering step in our knowledge of glacial movements. But let us take another quotation from his memoir. He says (p. 84, Vol. X.):—

‘Il y a une foule de faits qui sembleraient faire croire que la substance des glaciers jouit d’une espèce de ductilité qui lui permet de se modeler sur la localité qu’elle occupe, de s’amincir, de se renfler, de se rétrécir, de s’étendre, comme le ferait une pâte molle. Cependant, quand on agit sur un morceau de glace, qu’on le frappe, on lui trouve une rigidité, qui est en opposition directe avec les apparences dont nous venons de parler. Peut-être que les expériences faites sur de plus grandes masses donneraient d’autres résultats.’

This quotation shows that he saw the difficulty before him, looked it, as it were, full in the face; felt that the scientific weapons of that day were insufficient to vanquish it; obeyed the call of sound philosophy, and stopped. Dr. Tyndall has well  
observed



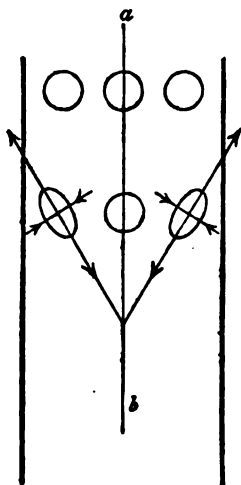
observed that he stopped where many have since stopped also, till more effective means were discovered of overcoming the difficulty in question.

And here, also, we feel ourselves called upon to observe how difficult it is, by means of a few extracts, to produce the conviction derived from the perusal of the whole memoir here spoken of, as to the caution and modesty of the author's philosophical character. Some of his views are such as have not been sanctioned by advancing science, but they are always put forth, when doubtful, with that care and reserve which, we think, appertains to the highest philosophy, and which assuredly, in the case before us, increases our confidence in the author's clearness of view on points of greater certainty. No mere extracts, however favourably chosen, could have given us the same conviction of the strength of M. Rendu's claim to priority in the case we have been discussing, as the entire perusal of his memoir. Scientific justice calls, we think, for the recognition of the Bishop's claim to the clear perception of the *pliability* of a glacier, while Principal Forbes appears to have had a stronger conviction of its importance. If the latter had subsequently established his Viscous Theory, he might well have afforded to M. Rendu the inferior merit of recognising this mere pliability of the aggregate glacier; but those who cannot admit that the term *viscosity* was ever intended to denote a property of ice equivalent to that clearly expressed by *regelation*, will scarcely regard the Principal as having laid the real foundations of a true theory of glacial motion in the Viscous Theory.

It has already been explained that the mass of a glacier will be subject to certain internal tensions and pressures due to the more rapid motion of its axial portions. The weight of the mass, the form and inclination of the glacial valley, and particular local causes, may also exert a great influence on these internal forces. When the sides of the valley are parallel, or when they are widely divergent, there are certain results, obtained by the mathematical solution of the mechanical problem thus offered to us, which are directly applicable to the actual cases of glaciers. In those cases, also, in which we are concerned with more irregular valleys, producing more irregular external forces, though, from the want of sufficient data, we may not be able to calculate the amount of the effects produced, we can often ascertain their nature and character, which is usually all that can be practically useful.

Let us first suppose the glacial valley to be elongated and of the simplest form, with parallel sides and a uniform inclination; and suppose, also, the upper and lower surfaces of the glacier to

move with the same velocity. This will not be exactly true, but will lead to no sensible error so long as we restrict ourselves to those upper portions of the mass to which alone we can commonly penetrate. Now we have already seen that, in consequence of the more rapid axial motion, the mass will be extended in some directions and compressed in others, and it has been distinctly proved by accurate investigation,\* that in the case before us the internal *tension* at any point of the mass will be the greatest in a direction pointing towards the upper extremity of the glacier and outwards towards its nearest side, and inclined to the axis at an angle of  $45^\circ$ . To explain the nature of the problem to which we would here direct the attention of our readers, as well as certain of the results deducible from it, we shall borrow a very simple elucidation of it from Dr. Tyndall.†



In the annexed figure,  $a b$  represents the axis of a regular trough-shaped glacial valley, like that above described. The glacier may be represented by a quantity of any plastic or viscous substance partially filling the trough when placed in a horizontal position. Conceive three equal circles to be stamped on its surface near  $a$ ; then if the end  $a$  of the trough be slightly elevated, and the opposite end at  $b$  be open, the viscous substance contained in it will flow in the direction  $a b$ , and it is found that the circle stamped on the axis retains its circular form, while the two lateral circles are transformed into the ovals represented in the figure, the longest axis of each oval being inclined at an angle of  $45^\circ$  to the

axis  $a b$  of the trough, while their shorter axes are perpendicular respectively to the longer ones. This manifestly proves that the longer axis of each oval is a line of maximum extension compared with any other line through the centre of the oval, the shorter axis being in like manner a line of maximum compression. In other words, supposing the mass to have cohesive power, the longer axis of each oval must be in a direction along which the *tension* at the centre of the oval will be greater than in any other direction through that centre; and, likewise, the shorter axis of each oval must be that in which the *pressure*

\* Memoir 'On the Theory of Glaciers,' 'Phil. Transactions,' 1862.

† 'Glaciers of the Alps,' p. 383.

will be the greatest. At any point on the axis *a b* there will be neither tension nor pressure resulting from the motion of the mass. These conclusions are in exact accordance with those arrived at long ago by an exact mechanical solution of the problem.

We are hence enabled to explain the formation of the large crevasses, and their general positions; for it is manifest that when the greatest tension becomes greater than the cohesive power, a crevasse must be formed perpendicular to the direction of that greatest tension; *i. e.* it must be formed along the minor axis of each oval in the case elucidated by the figure. Consequently, the crevasses in the two marginal portions of the glacier respectively will converge towards each other as they proceed towards its higher end (*a*). In the cases of *converging* valleys, the more general solution of the problem shows that the lateral crevasses will always converge towards each other, as just described; but will make angles greater than  $45^{\circ}$  with the axis *a b*. If on the contrary the valley rapidly *diverge*, the crevasses will diverge as the lines of motion of each part of the mass diverge with the valley itself. The lower extremity of the Rhone glacier presents a most striking example of these diverging crevasses.

It should be remarked that the directions of the crevasses above determined, are those in which they will be originally formed. They remain open for a certain time, and then close up, and the ice on opposite sides of them is regeled into a continuous mass. During this time the more rapid central motion constantly tends to bring them, in parallel-sided or convergent valleys, more nearly to perpendicularity with the axis *a b*. Still they are observed to lie within the angular limits above stated, with few, or, perhaps, no exceptions. The exact positions in which large fissures will be formed may doubtless depend materially, in many cases, on local conditions; but this will not usually prevent a dominant general cause from impressing a dominant general character on the resulting phenomena. We have seen, too, that glacial ice appears to have no greater tendency to cleave in one direction than another, so that the directions of the crevasses must be determined by external causes, and not by the internal structure of the glacier.

We have already spoken of the curious phenomena of the veined structure in glacial ice (p. 94). It appears to be closely associated with the directions of greatest pressure above explained. Wherever it exists in the same locality with crevasses, the directions of the latter are stated to approximate very generally to perpendicularity with the superficial curves of structure. This law is usually observable in the marginal portions of glaciers, in

which alone the more regular crevasses generally exist to any great extent; and it therefore follows that, in those localities, the surfaces of structure must be perpendicular, at every point, to the directions of greatest pressure. We can also prove this law to hold in cases where regular crevasses are either non-existent or comparatively very rare, as at the bottoms of ice-falls and along the axial portions of a glacier. In the first case, there must necessarily be an enormous longitudinal pressure from the accumulation of ice *à tergo*; and in the latter case, the axis of the glacier (as finely illustrated on the Aar glacier) is often indicated by a great central moraine, formed by the junction of two great tributaries. In such instances, the ice of the two tributary streams is forced into the same bed, and must usually produce an enormous transverse pressure in the united glacier. In the first case here cited, the structural curves are directly transverse, and in the second they are entirely longitudinal, and are consequently in both cases perpendicular to the directions of greatest pressure. All other observed cases lead to the same inference.

Some time ago Dr. Tyndall made certain experiments, which, together with others made by Mr. Sorby, led him to suppose that the cleavage structure in rocks was due to the great pressure to which they had been subjected, the planes of cleavage being perpendicular to the directions of maximum pressure. This suggested to him the idea that the veined structure might also be due, in like manner, to pressure. The analogy between the two cases is manifest; but as the theory of rock-cleavage is uncertain, that of the veined structure, so far as it rests on this analogy, must, *à fortiori*, be so likewise. Dr. Tyndall has also made experiments on the liquefaction of ice by pressure, which afford an additional presumptive proof in favour of the theory above mentioned. We must refer the reader to the 'Glaciers of the Alps' (p. 408) for an account of these ingenious experiments. Though we may not yet regard this phenomenon of the veined structure as unequivocally accounted for by the analogy and experiments here spoken of, it seems not improbable that they may lead in the path towards the right solution.

Principal Forbes also, as is well known, put forward, many years ago, his theory of the veined structure. He conceived that, as different parts of the glacier move faster or slower than the adjoining parts, two contiguous particles moving along adjoining parallel lines must generally be moving with different velocities; and thus, if in contact at any proposed instant, the one having the greater velocity would slide past the other, and in time get separated from it. Thus, suppose the velocity of every particle in a vertical plane parallel to each side of a regular

regular canal-shaped glacier to move with the same velocity, and suppose the axial parts of the mass to move the fastest; then will every particle in one of these planes tend to slide past the neighbouring particle in one of the adjoining planes; and thus there will be a tendency to make the whole of one of these planes slide on the surface of the adjoining one, and thus also to break the cohesion between them. It was in this presumed bruising and rupturing along these parallel planes that the author of this theory considered the veined structure to originate. His first idea was that a greater facility was thus afforded for the infiltration of water between those bruised laminae, and that this infiltrating water became frozen by the winter cold, and formed the more compact and transparent ice of the laminae. A real physical cause was thus assigned for the veins, but it was entirely inconsistent with the internal temperature of the glacier, into which, as above explained, the winter cold does not penetrate many feet. The idea was afterwards abandoned, but I am not aware that the author substituted for it any other physical cause. The veins appear to have been attributed only to the bruising of the mass, as above described, and therefore to a mechanical rather than to any determinate physical cause.

Principal Forbes did not determine the positions of the planes or surfaces of the veins, as above, by the simple consideration of the relative motions of contiguous particles, which, in a canal-shaped glacier, would give the marginal lines of structure necessarily parallel to the sides,—a direction from which they are often observed to deviate very considerably. His explanation was, that a *drag* towards the centre of the glacier, in consequence of its more rapid motion there, caused an oblique motion of the marginal particles. This explanation was founded on a demonstrable mechanical error;\* and the Ripple Theory, by which he attempted to explain his conclusions, has now been proved to be entirely fallacious.† Again, it has been stated that under the great central moraine of the Aar glacier the veined structure is very finely developed where there can be no difference of motion in adjoining particles. It is also impossible, in our opinion, to give any real explanation of the positions of the surfaces of structure near the foot of an ice-fall, consistent with this theory.

If the surfaces of structure be considered as due to the actual difference of motion of contiguous particles, the problem becomes only a geometrical one, and we conceive it to have been shown demonstrably that the positions of the veins or surfaces of

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\* See References in second footnote, p. 106.

† 'Glaciers of the Alps,' p. 398.

structure could not coincide in that case with their observed positions.\* It is impossible, we think, to accept this theory if Principal Forbes's 'differential motion' of two contiguous particles means the actual difference between their instantaneous motions; and yet, if it do not mean this actual difference, it is inconceivable to us what intelligible meaning can be assigned to it.

Priority in the observation of this phenomenon of the veined structure, immediately after Principal Forbes had remarked it in 1841, was made a subject of controversy. M. Agassiz stated himself to have previously observed it; but in his '*Système Glaciaire*' (p. 208) he claims for M. Guyot the credit of having first distinctly noted this structure in 1838 on the *Glacier du Gries*. In support of this claim he gives a quotation from a communication made by that observer to the Swiss naturalists at Bâle in the year just mentioned, and which is now placed in the archives of the Society of the Natural Sciences at Neuchâtel. The quotation is too long for insertion here, but we may cite the following passage from it as in itself conclusive. M. Guyot says that, being on the *Glacier du Gries*,—

'Je vis sous mes pas la surface du glacier entièrement couverte de sillons réguliers de 1 ou 2 pouces de largeur, creusés dans une masse à demi-neigieuse, séparés par des lames saillantes, d'une glace plus dure et plus transparente. Il était évident que la masse du glacier étoit ici composée de deux sortes de glace, l'une, celle des sillons, encore neigieuse et plus fusible, l'autre, celle des lames, plus parfaite, cristalline, vitreuse, et plus résistante, et que c'étoit à l'inégale résistance qu'elles présentaient à l'action de l'atmosphère qu'étoit dû le creux des sillons et la saillie des lames plus dures.'

It was at once admitted, we believe, by Principal Forbes himself and all other glacialists, that the evidence in favour of M. Guyot's priority of discovery was established. Principal Forbes's claims, as regards these phenomena, do not rest on the precedence due to his observations, but on his recognition of the importance of this peculiar and curious structure as a general character of glacial ice.

The difficulty of explaining the adequacy of the forces acting on a glacier to enable it to overcome the numerous and apparently insurmountable obstacles to its motion, has always been one which has been more or less experienced by most glacialists. A prevailing idea has been that the lower portions of a glacier are crushed simply by the weight of the superincumbent mass—that the cohesion of those portions is thus destroyed and the mass

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\* Memoir in the '*Transactions of the Royal Society*,' 1862, p. 725.

pushed

pushed outwards, where it meets with the fewest obstacles. And yet the Peak of Teneriffe, for example, does not crush its basal strata into atoms, and thrust out its own foundations. If it were possible that the weight of that mountain could be suddenly superimposed on terrestrial rocks which had been solidified under a comparatively small pressure, it seems probable that those rocks would be thus crushed into powder, if sufficiently brittle; but Nature does not work in this manner. She educates the rock, as it were, to prepare it for the load it has to bear, by the slow and gradual superposition of the superimposed weight. And similarly if a stratum of ice, frozen under the mere pressure of the atmosphere, could be placed under the weight of a glacier at a temperature below 32° (Fahr.), it would be instantly crushed into powder, and its cohesive power so far destroyed as to make it capable of being thrust outwards on a horizontal plane by a comparatively small vertical force. But if the temperature should be exactly 32° (Fahr.), as in the lower parts of a glacier, the structure and cohesion of the crushed ice would be immediately restored by regelation, and it would be, at least, an apparent contradiction to suppose that the ice would be again crushed by the pressure under which it had just before been regaled and consolidated. We doubt whether any mass of ice producing a pressure within the limit of regelation (if there be such a limit) could squeeze out its lower portions on a horizontal plane, so as to produce any continuous motion like that of a glacier. It is the resolved part of the force of gravity parallel to the bed of the glacial valley (always inclined to the horizon) which we conceive to be the force really effective in urging onwards every part of the glacier.

Principal Forbes appears to have been impressed with the difficulty of assigning an adequate cause for the crushing effects which he supposed to be produced in the interior of a glacier, and by which the cohesion was destroyed and its motion facilitated, as if it were viscous. He says that a considerable quantity of water is constantly percolating through the minute fissures of the mass, or held by them in capillary suspension, and that this water 'exercises a tremendous hydrostatic pressure' to push onwards the whole mass in the direction of least resistance.\* Now, we feel ourselves bound to assert that this conclusion is founded on an entire misconception of the mechanical action of this internal water. Admitting the existence of the capillary fissures, filled with water throughout the glacier, what would be the con-

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\* 'Occasional Papers,' p. 165. See also a Memoir in the 'Transactions of the Royal Society for 1846,' Part III.

sequence of the supposed enormous hydrostatic pressure in these minute internal tubes and fissures? The answer is obvious: the water would rush forth from every crevice on the exterior surface of the mass. No such *hydrostatic* pressure, therefore, can exist. In fact, if the water be held at rest in capillary crevices, it will transmit no hydrostatic pressure whatever, but will simply, by its own weight, increase the weight of the mass. Again, if the water flow through these minute fissures with a *steady* motion (and such its motion must be very approximately), it will produce no hydrostatic pressure at all. The truth of both these assertions may be strictly proved,\* and is, in fact, sufficiently obvious to any one familiar with such investigations. We have here an example of the incautious appeals which have been made to mechanical principles in the solution of certain glacial problems.

It is to the small adhesion of the lower surface of the glacier to its bed, that the enormous power of the internal forces to crush and dislocate the general mass is due. The smallness of this adhesion in a glacier presents a case similar to that of a long beam in a horizontal position, supported principally by forces acting at its two extremities. The more exclusively this force is thrown on these extremities, the more likely will be the beam to break by its own weight. And thus will the glacier be the more likely to be dislocated when the principal forces opposing its motion act along its flanks, while the axial portions are comparatively little impeded by the small friction on the lower surface of the mass.

The subjects we have been discussing involve a degree of complexity which may render it desirable, for the clearer comprehension of them, that we should give a brief summary of the contributions which different glacialists have made since the time of De Saussure, to our knowledge of glacial facts and glacial theories. We have already spoken of Rendu's Memoir, and of the claim which it establishes for him of having been the first to recognise clearly and distinctly the pliability of a glacier, and that it moved, speaking generally, *as if* ice were a viscous substance, and in a manner resembling that in which the water of a river moves. Guyot's claim to having been the first to observe and to describe clearly the veined structure, we conceive to be unequivocally established. Agassiz has probably done more than any other man to diffuse a general interest in glacial subjects throughout the scientific world. He was enabled to accomplish

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\* Memoir 'On the Theory of Glaciers,' 'Transactions of the Royal Society.' Read May 22, 1862.



this by his high reputation and wide acquaintance among men of science, and the esteem in which he was held by them, as well as by his zealous activity as an observer, although his physical theories were never received with much favour. His second work, the '*Système Glaciaire*,' remains the most copious deposit of accurate and careful observations which we possess on many glacial phenomena, as his map of the Aar is by far the finest topographical record we have of any glacier and its superficial phenomena. Principal Forbes's '*Travels in the Alps*' is also a work full of interesting matter relating to Alpine glaciers generally, and his sojourn among them. His researches were unwearied, and he acquired and communicated to us a large amount of general and detailed knowledge of glacial phenomena. For this, and for the general interest with which he helped to invest the subject, we consider the scientific world to be greatly indebted to him. The prevailing defect of his observations is that they are subordinated too much to two dominating ideas, the viscosity of glacial ice and his supposed origin of the veined structure; and therefore it is that his observations, though extending generally over a wider range than those of M. Agassiz, are less valuable in many cases where greater detail and minuteness are essential. We think that for many years imperfect justice only has been meted out to the '*Système Glaciaire*' in this country, and that our estimate of the claims of its author, as well as those of some few other foreigners, may have been perhaps, if we may use the expression, somewhat too insular. There is scarcely any part of Principal Forbes's speculative theories to which we can assent, and it is quite certain that much of his mechanical reasoning is altogether erroneous. Mr. Hopkins was the first to explain the sliding of glaciers and their unaccelerated motion. He has also applied accurate methods of investigation to the solution of many of the mechanical problems which glacial theory involves. Dr. Tyndall in recognising the necessity for precise definitions, and for exact modes of research both in the mechanical and experimental branches of the subject, has afforded excellent aid to the advance of glacial theory. He has done good service also in the observations he has made; but it is in the substitution of a determinate and beautiful experimental result for a hypothesis unfounded on any determinate property of matter that he has rendered the greatest service in this department of science. The results of regelation explain exactly what glacial theory required to be explained; but they do not effect this through the medium of viscosity. Regelation does not *use* viscosity, but *supersedes* it, and renders not merely the word itself, but any definite idea which has ever been attached to it, useless in all  
exact

exact reasoning on the subject. We cannot refrain from appealing in the name of exact science, and on behalf of the rightful claims of exact philosophers, against the merging of the definite into the indefinite, or the *Sliding and Regelation Theory* into the *Viscous or Plastic Theory*.

In what we have said on regelation we have been anxious to point out that the value of the actual results of regelation is little diminished for the glacialist by our ignorance of the exact *modus operandi* by which those results are produced. The theory of gravitation might be advanced if some astute philosopher could prove that gravity was only the effect of some still simpler property of matter; but Physical Astronomy, in the sense in which that term is used at present, could scarcely be thereby rendered more complete than it is; and so, though the process of regelation may hereafter be explained, the discovery of the results of that process will not the less constitute a decided and independent step in glacial science, and one which, we believe, will always hereafter be recognised as such.

We have already mentioned the name of M. de Charpentier, but we should not do justice to him if we did not recognise his claim as having been one of the first glacialists, though preceded several years by M. Venetz, to direct attention to the former great extension of the Alpine glaciers, as manifested by the enormous masses of blocks and débris, which have evidently been derived from distant localities, and the transport of which he attributed to the agency of glaciers. But this is a subject which our space will not allow us to discuss; and, in fact, it may rather, perhaps, be regarded as belonging to the wide domain of Geology than to the more restricted one of Glacial Theory. In the later history of our planet it has opened to us a new and interesting page which has yet been but imperfectly deciphered, and which can only be truly interpreted by the combined efforts of the geologist and the glacialist. We confess that we are not without apprehension that many geologists may be disposed to accept theories in which the action of glaciers is the leading agency, without due regard to those mechanical and physical principles to which the motion of glaciers must in all cases be subordinated. We shall take one important point to elucidate our meaning. We have seen (p. 79) that below the snow-line the thickness of a glacier decreases from year to year, principally by the melting away of its superficial portion. Suppose the thickness of a glacier at any assigned point of its course to be 1000 feet, and to diminish 10 feet annually. Let us further suppose the glacier to move at the rate of 400 feet a year. Then for every 400 feet in the length of the glacier, measuring towards its  
lower

lower extremity, there will be a decrease of 10 feet in the thickness, which will consequently be reduced to zero at the distance of 40,000 feet, or about  $7\frac{1}{2}$  miles, which would be the length of the glacier below the point at which its thickness has been supposed to be 1000 feet. The wasting of 10 feet annually in thickness is very nearly the estimate of M. Agassiz, founded on careful experiments, made on the glacier of the Aar, near the junction of its two great tributaries, and at the height of some 8000 feet above the sea. The motion of 400 feet in a year is greater than the mean annual motion of the Aar glacier, and less than that of the Mer de Glace. It may be taken as a sufficiently near approximation to the mean motion of the Alpine glaciers.

Let us take an actual example, analogous to the imaginary one above given. Erratic blocks exist on the flanks of the Jura opposite the mouth of the valley of the Rhone, at the height of at least 3000 feet above the Lake of Geneva, and it is universally allowed that they must have been transported by some means or other from different localities in the valley of the Rhone. The favourite theory at present appears to be that their transport was effected by a glacier which descended the whole length of the valley just mentioned, and thrust itself across the central Swiss valley, to deposit its burden of blocks on the sides of the Jura in the form of a terminal moraine. We have here no intention of discussing the truth of this theory; we wish simply to point out some difficulties which, it would appear, have not engaged the attention of those who advocate it. According to Charpentier, the highest lines of erratic blocks may be distinctly traced along the sides of the Rhone valley, their elevation on either side of it at Martigny being about 2500 feet, and at the mouth of the valley 2300 feet above the river. We take these heights as indicative of the depth of the ancient glacier between the two places just mentioned. Now let us conceive the conditions as to the motion of the glacier and the rate of its wasting away to be the same as in the imaginary case above taken, or very nearly the same as in the Aar glacier at the present time; and let us also suppose, to make the analogy complete, that the valley of the ancient glacier was continued beyond its present termination. It then follows, from a calculation like the above, that it must have extended some 15 miles beyond the mouth of the present valley. But this ancient glacier, instead of continuing along a trough-shaped valley, must have debouched into the open plain of Switzerland, and thus have been at liberty to diverge in nearly all directions within a semi-circle, like the glacier of the Rhone from the foot of its fall. Consequently, the external surface  
exposed

exposed to the dissolving influences of the sun's rays, and of the atmosphere, would be much increased, and the thickness of the glacier would be reduced to zero long before its remoter boundary had attained a distance of much less than 15 miles. And here it will be observed, that the temperature of the Swiss valley is tacitly supposed to be reduced to that of the middle region of the Aar glacier, at an altitude above the sea of about 8000 feet. Nor would that, as our calculation tells us, be cold enough to secure the protrusion of the glacier, as above supposed, to the flanks of the Jura, a distance of 50 or 60 miles. In fact, it would be necessary that the temperature at the level of the Lake of Geneva should be lower than that of the snow-line, *i. e.*, lower than the present mean temperature in the Alps at the height of about 10,000 feet. It would be useless to talk of this enormous depression of temperature being produced by any peculiar disposition of land and sea. The only conceivable terrestrial cause to which it could be chiefly referred, must be the natural elevation of the whole region to the amount just stated. Then the glacial mass in the Swiss valley would not melt away, as it would below the snow-line, in its transit to the Jura, which it would reach provided the fall between the mouth of the Rhone valley and the top of the Jura chain were sufficient to secure its motion in that direction. This fall would require the Alps to be raised some 4000 or 5000 feet more than the hills of the Jura. Mont Blanc would thus become nearly 30,000 feet high, while all the lower regions surrounding it would be raised to an elevation of 10,000 or 12,000 feet above the level of the sea—consequences which might well alarm the boldest catastrophist, and dispose us to search carefully, before we finally admit them, for some simpler mode of transporting erratic blocks from the Alps to the Jura.

The great difficulty which besets all theories involving an extreme extension of ancient glaciers in Western Europe, arises from the apparent impossibility of assigning any adequate terrestrial cause, except that of extreme elevation, for the enormous depression of temperature in these temperate latitudes, which such theories tacitly demand. Terrestrial causes for considerable variations of climatal temperature have been assigned, depending on the influences of warmer or colder ocean currents, and of possible changes in the disposition of sea and land; but it would be futile to attribute to such causes the immense depression of temperature required in a case like that discussed above. But our immediate object is not to discuss the various causes by which terrestrial temperature may be affected, but to remind geologists of the physical impossibility so clearly indicated by established glacial facts

facts and theories, of any prolongation of glaciers beneath the snow-line, beyond those limits which may be consistent with the extent of such prolongation calculated as in the preceding example. At present we have only to recommend that in framing the theories which erratic blocks may suggest to us, we should endeavour to bring them into strict accordance with the mechanical and physical principles which govern the motions of existing glaciers, as well as with all associated geological phenomena, and thus to establish that harmony of which we have spoken in the commencement of this review, as the final and most perfect test of scientific truth.

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- ART. IV.—1. *The Empire. A series of Letters published in 'The Daily News' in 1862 and 1863.* By Goldwin Smith. Oxford and London. 1863.
2. *Lectures on Colonization and Colonies, delivered before the University of Oxford in 1839, 1840, and 1841.* By Herman Merivale, A.M., Professor of Political Economy. New Edition. London. 1861.
3. *Reports of the Past and Present State of Her Majes'y's Colonial Possessions, transmitted with the Blue-books for the Year 1860.*
4. *Twenty-first General Report of the Emigration Commissioners.*
5. *Letter to the Right Hon. Benjamin Disraeli, M.P., on the present Relations of England with the Colonies.* By the Right Hon. C. B. Adderley, M.P. New Edition. London. 1862.

THAT it should even be made a matter of question by any, whether Great Britain shall retain her colonial possessions, is something new and strange. But since there are men among us, and men of accomplishment and ability, who take the negative side, and who would resent the imputation that their words are no more than the casual effusion of a passing and thoughtless grumble, we must require them and others to bestow somewhat ampler reflection upon the subject.

The arguments of those who, like Mr. Goldwin Smith, inculcate the necessity of dismembering the colonial empire are obvious and simple, and based on the narrowest possible view of a few facts, excluding from consideration many facts of far greater importance. These arguments are generally stated as follows: Colonies 'do not pay.' They are useless for the purposes of commerce, and too costly for the purposes of power. Since the recognition of the principles of Free-trade by the leading statesmen of the great parties, they are superfluous for the

the supply of what we consume, and equally superfluous for the consumption of what we produce. The days of bounties and discriminating duties have passed away. We buy our lumber and our corn and fish, not in the close markets of Canada, Nova Scotia, or Newfoundland, but in the open market of the world. We import our sugar, not exclusively from Mauritius or the West Indies, but from every tropical country where it can be raised. We send our cottons and our cutleries with no less and no greater advantages to foreign and alien lands than to our own colonial dependencies. Whatever wealth or enjoyment trade can give us, we have independently of our colonies. Whatever appearance of power or state is given by their possession is needless for our security, and disproportioned to our strength. We should be as rich, as productive, as secure, and as powerful without Canada, Australia, Ceylon, and the West Indies, as we are with them.

This argument would be imperfect and ineffective if it were not strengthened by appeals to personal fears and public exigencies. Englishmen generally care little for abstract speculation. It is only when its doctrines are reduced to practice, and touch the pockets of the public, that theories, either of government or trade, find numerous advocates and propagators in England. The present crisis is favourable to these anti-colonial theories. When the paralysis of a great branch of national industry has carried panic and destitution to the homes of so many of our countrymen and countrywomen, and when the circle of indigence threatens to become even wider, it is natural that the taxation of the country should provoke a more than ordinary inquisition and a more than usually severe criticism. Seventy millions sterling is indeed a huge burden to lay on thirty millions of people who have to pay in addition poor-rates, police-rates, and highway-rates. To many an angry complainant the expense of keeping colonies explains the pressure of a gigantic expenditure; and the supposed unproductiveness of its object finds a large body of ready remonstrants. Were the circumstances of our time different from what they are just now—were the Lancashire mills humming with the buzz of continuous labour, and Lancashire operatives spending full wages—there would be neither question nor murmur. The Government might levy ten millions of additional taxation and plant half-a-dozen new settlements in various parts of the world, while the economists and the philosophers declaimed, without a hearing, against our expenditure and our folly.

But though the circumstances which have enlisted a portion of the public on the side of theories which are not universally popular,

popular, are, we hope, temporary and fluctuating, the question of the value of colonies is not without importance, both deep and permanent. It is true that the abrogation of the old Colonial system has destroyed a certain narrow class of advantages which once belonged to the possession of colonies; it is true that our dependencies do not contribute directly to the revenues of the empire; it is true that certain responsibilities of protection attach to their retention; still, after making all these admissions, we think it can be shown to be far more advantageous to England to keep her colonies than to give them up.

What have the Colonies done for England? To answer the question, it is necessary to consider certain conditions which would have existed but for them.

Do those who thus interrogate us ever take the trouble to inquire what is the number of Englishmen, not of one class but of every class but the smallest and highest, for whose energies, mental and physical, our Colonies afford a constant and ready safety-valve? It may perhaps be known to many that the annual emigration of our labouring poor to the Colonies comprises in ordinary years about 50,000 souls, and in extraordinary years 100,000. This is of itself no inconsiderable escape from evils from which neither Poor-laws, nor prisons, nor anything else but an odious enforcement of (so called) Malthusian restrictions, could save us. And it is not only relief from the pressure of population on the means of subsistence which this emigration supplies, but something more valuable still. The simple annals of the poor teach us that the humble emigrant, whether from Tipperary or from Devonshire, contrives to remit to the old folks at home sums which by the recipients must be regarded as absolute wealth. This is of itself an important and valuable result of emigration. It is one which, by abating the poverty of the poorest classes, abates also their crimes; it is one which provides employment for those who remain in England to work, and support for those who remain unable to work. But it is by no means the most valuable result of emigration. It would be possible to carry on the government of the country, even if the labouring classes were suffering from periodical visitations of destitution, or from a normal state of indigence. The country would be less happy, and less wealthy, and perhaps less orderly and peaceful; still it would not necessarily be convulsed by civil war, or brought to the verge of revolution, without other and more powerful causes. But emigration does prevent one of the most potent causes of civil anarchy and domestic broils. It provides an ample field for the bold, the adventurous, and the discontented. These are to be found in all countries

countries in the world, and they are perhaps more numerous in England than elsewhere. Look at the sons of our trading and professional classes, the sons of our unbeneficed and poorer clergy, of our half-pay officers, of our small provincial lawyers, doctors, shopkeepers, factors, brokers. Add to these the younger sons of our least wealthy landed gentry, and the sons of men whose wealth, acquired by the lucky gains of commerce, has disappeared as suddenly as it came. All these young men have had some education; have had their faculties and ambition whetted by the stories of adventure which schoolboys most love to read; have been brought up with a taste, not for luxury, but for comfort and abundance; have the natural English desire to rise in the world; are tolerably sharp, strong, and bold; hate idleness and unprofitable quietude; are, in a word, resolved to 'get on.' But few of them have either the natural or acquired advantages which could alone ensure them success in the higher branches of commerce, or in the learned professions. A select fraction may hope to attain the prizes of the Church and Bar; or, failing these, to vegetate in after years as college dons or rural vicars. Here and there a young Stephenson may, by dint of innate genius and unfaltering resolution, win fame and fortune as an engineer. But the vast majority of them can only aspire to ill-paid curacies, the smaller vicarages, and that multitudinous form of employment, the holders of which are termed 'clerks.' Such a brigade of indigent semigentry, inheriting the wants of the higher and the energies of the lower classes, would, by natural accretion in two or three generations, swell into an 'army of discontent,' which neither the reverence for law, nor sound common sense, nor any other virtue or quality for which, as a nation, we give ourselves credit, could prevent from becoming dangerous to property and social order.

Such a class as we have described would furnish the leaders and the abettors of every movement directed against the possessors of wealth and the employers of labour. The Chartist, the Socialist, the Proletarian, burning to destroy the existing institutions of his country, would find each his natural leader in men whose education had made them more sensitive to the bitterness of poverty, and more able to denounce its injustice, than the bulk of their fellow-sufferers. England might, in the course of a few generations, witness what France and other Continental States have often witnessed: the ardent and intelligent youth of the middle classes heading hungry mobs of the unlettered and excited poor; erecting barricades, and tearing up pavements, not for the vindication of a political idea, but in resentment at the partiality of Fortune and the inequality of human conditions. England is saved from this combination of educated vigour with intemperate anarchy by the possession



possession of domains far wider and more productive than the broad acres of her own insular metropolis. How many men, whom starvation at the English Bar, or in the English Church, or in the murky offices consecrated to English commerce, would have impelled into the ranks of professional demagoguism, and inspired with that bitter detestation of their social condition which only a life of drudging and instructed indigence can inspire—how many such men have been redeemed from the ranks of Discontent, and been made honest and patriotic Conservatives, by the rich rewards of a Colonial career? Let any man who doubts this position visit Edinburgh, Glasgow, Dublin, Cork, the Highlands, and every non-manufacturing town of England. Let him go to the houses which are rented from 30*l.* to 70*l.* a-year, and inquire of the resources of each family, and the destination of its members. He will find that in the majority of the families of small and moderate means at least one son—oftener more than one son—is making a fortune or earning a livelihood in India, Australia, New Zealand, the Cape of Good Hope, or Ceylon; perhaps remitting money for the support of a mother and sisters. Everywhere throughout the empire we see families maintained in comfort by the mental or physical toil of their relatives in the wide field of India and the British Colonies. Add to these also the families who have emigrated wholesale to the eastern and southern dependencies, and thus eased the pressure of ‘genteel’ competition at home, and we obtain a clear notion of the relief which our transmarine possessions enable us to afford to the struggling classes of our population. There may be many who, admitting the truth of our assertion, yet question the justice of the policy which it illustrates, and ask—as we ourselves have heard Chartists and others ask—‘Why should poor folks be sent to earn their bread abroad when there is sufficient land to divide among all at home?’ Our readers will not trouble us to enter on this deep argument. The majority of them will rather, we believe, be content to acquiesce in the maintenance of a system which reduces the number of such questioners to the lowest possible amount; which diminishes infinitely both the causes and the occasions of agrarian outrages, and leaves the doctrines of property and primogeniture unassailed, save by occasional and unimportant declaimers at a borough hustings, or by the rabid rhetoricians of an uninfluential press. So long as the growing commerce and agriculture of our colonial dependencies find harvest-work for the arms which for want of it might be doing violence here, and useful employment for brains which might be scheming mischief here; and so long as the bitter Radical of England developes into a Conservative at the Antipodes, so long

we shall have a very good *primâ facie* case for the retention of our Colonies.

‘But,’ it is answered, ‘why keep colonies for such a purpose? If all that you want is to get rid of a redundant population, you can do this without sending them to colonies. They can go—as many of them do go—to the United States. When they are there, they not only ease the labour-market in England, but increase the number of the consumers who require its produce. They do all that you desire your colonists to do, without the expenditure and taxation which your colonists contrive to impose upon you.’

We would first of all remind these objectors that the existence of the United States as a field of immigration is an argument in favour of colonization. Had there been no English Colonies in America, there would have been no independent States to receive adventurers from England. So far as the Northern Republic is qualified to adopt and provide for the surplus population of England, just in that degree are the foundation and the protection of colonies justified on the score of utility. But the argument goes farther. There are many Englishmen who do not like to live in the United States; there are many who do not like their countrymen to live there. Rightly or wrongly, they hold that neither the social habits nor the political institutions of that Republic are suitable to the tastes of Englishmen. This prejudice may perhaps be condemned or ridiculed. But there is another consideration which cannot be treated with contempt. Although two-thirds or three-fourths of the people inhabiting the New England States are the descendants of men who were born and reared in this England of ours, it is notorious that they have no remarkable affection for the land of their forefathers. A very large proportion of our emigrants have gone to the United States, and it is not improbable that those States may continue to be our chief outlet. But the experience of the past leaves us no hope that the families of English emigrants can be imbued with other sentiments than those which are the traditionary inheritance of the population which surrounds them. It becomes, therefore, an object of some moment to provide a domicile for our emigrating countrymen which shall at least leave them in some degree English in heart and allow their children to be English also. Such domiciles may naturally be supposed to be found by many in our own Colonies. The Colonies likewise will afford (as long as English institutions prevail) a more profitable because a safer investment for our capital than foreign countries.

But the question then meets us,—Do we not pay too dearly  
for

for this appendage? Is not the annual disbursement of three millions and a half for its protection rather too much for the benefits which it is supposed to bring in?

It is said that the advantages which we derive from our Colonies are not worth the money which we pay for them. It is difficult to adjust this question on any basis of arithmetical accuracy, because it is impossible to compare incommensurable quantities. It would be as easy to define the exact pecuniary value of our Colonial possessions as to solve the school-boy's problem of the distance from Westminster Abbey to Christmas Day. On the one hand, we spend upon them a sum which may be computed as varying from three to five, or—at the most, and only in critical and exceptional times—six millions.\* But, on the other hand, England without Colonies means England with a redundant population—England with more mouths than she can feed—without an outlet for individual enterprise and individual restlessness—without constant vent for her industry and its fruits. It means Glasgow, Manchester, Leeds, Sheffield, and Birmingham with a chronic paralysis of trade and periodical stagnations of work. It means hunger, famine, exasperation, and sedition. It means tumult, threats, armed gatherings, revolt against authority, and persecution by authority. Who shall gauge the exact value of these evils and their antidote, in pounds, shillings, and pence?

But, it is contended, the Colonists should do something more than they do for their own defence. They have no right to be protected by English soldiers paid by English tax-payers. They ought to furnish their own soldiers, and pay for their own protection. The examples of the American Colonists are cited. The conduct of the New Zealand Colonists is contrasted with that of the settlers of Virginia in New England. The helpless appeal to England against the invasion of the Maoris is compared with the sturdy alacrity with which the Virginians of one age rushed to meet the Seneca Indians, and the Massachusetts men of another put the Pokanokets to flight. It is asked, why have the English Colonists of the present day been allowed to degenerate below the standard of those of former days? Why are the Canadians less warlike and more costly than Virginians or Carolinians? Why is New Zealand a greater burden to us now than New England was two centuries ago?

The question is plausible. It is calculated to enlist the sym-

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\* In the return of Imperial expenditure for Colonial services, printed by order of the House of Commons on 27th March, 1863, we find that the total expenditure in the year ending 31st March, 1861, was, for military purposes, 3,342,243*l.*; for civil purposes, 167,222*l.* Aggregate, 3,509,465*l.*

pathies of the tax-payer, if not of the historical student. Yet it is only plausible; and this we hope to show without for a moment saying that the Colonists have done all that can reasonably be required of them, and that they need do no more.

The days to which the economical reformers of our Colonial policy refer were very different, in all the essential incidents of war and peace, from our time. The men who founded the New England Colonies had fled from persecution, from prelacy, from kingly power, from aristocratic forms. They sought not so much trade or opulence as safety for their persons and freedom for their ideas. They sought at once relief from persecution, and the power of persecuting others. They desired to indulge their own speculations on civil polity and church government. Not one in ten of the Northern Colonists in America was impelled by unmixed love of gain, by the prospect of rapid production and large exportations; and of those who colonised Virginia and Carolina, the leaders, if not the multitude, were inspired rather by the dream of a brilliant polity than of commercial opulence. Least of all did either the Colonists of the North or of the South look forward to returning to the mother-country with colonial fortunes. For both one and the other the colony was to be the home of their families and the domain of their every hope and interest. Moreover, the Colonists of that age had but scant means either of returning home or of communicating with the mother-country. An age which sees thirty large, well-equipped steamers cross the Atlantic every month can hardly conceive the idea of a period when a few slow-sailing vessels performed uncertain and capricious voyages in the course of a twelvemonth. The Colonist of the 17th and 18th centuries was essentially and necessarily a settler: the Colonist of the 19th century may or may not be a settler. The colonist from the middle ranks is more frequently an adventurer making a fortune than a settler founding a home, although the lower ranks almost always furnish permanent settlers. The merchant, the tradesman, the lawyer, or the gold-digger of Australia—the lawyer, merchant, or even the planter, in Mauritius or Guiana—these are men to whom the colony is a temporary, not a permanent abode. Neither in their antecedent history nor in their prospective purposes do our modern Colonists resemble their predecessors. They have been goaded neither by spiritual nor by temporal tyranny to seek a home beyond the seas. They are neither fired by Anabaptist ardour nor by republican enthusiasm. Neither are they, for the most part, inspired by an adventurous desire of fighting Caffirs and wild Indians. They are—not, indeed, universally, but generally—  
Englishmen

Englishmen desirous of making their fortunes in transpontine England more readily than they could do in the old country; retaining, and anxious to retain, their personal connexion with their countrymen, and to lay their bones at last near the bones of their forefathers. Thus they carry out with them none of those elements of antagonism to the Government and the existing order of things—none of that combative self-assertion—which distinguished the followers or the successors of Raleigh, of Smith, of R. Williams. Neither would they be satisfied with the tardy progress which did not disgust the first settlers on the Kennebec. A far more rapid growth of population, and a far larger augmentation of wealth than that contemplated by former generations, are the objects and prospects on which the mind of the modern Colonist is set.

He therefore lacks the military element in that degree in which it distinguished the Puritan exile or the Cavalier adventurer; but it is not true that he lacks it altogether. Canada is often taunted with her distaste or indifference to the duty of self-defence. But Mr. Adderley, who is the great public prosecutor of our Colonists on this indictment, is fair enough to remember the services rendered by Canadian volunteers in 1812. And we are confident that in any civil disturbance, or even hostile invasion, Canadian and Australian volunteers would do all that volunteers can do. But what can volunteers do, at the best? What can they do against disciplined troops, and in a long war? We are reminded of the War of Independence and the American volunteers. The example is less useful to them than ourselves. But the men who fought against us in the American war had fought on our side, along with English soldiers, in other wars. They had been brigaded with our troops against Indians and against French. They had learned from us all the military lessons which they had not learned from the Indians and the dense forest-bush. And what the value of that lesson was, may best be estimated by those who have followed the movements of another army of American volunteers, ten times as numerous as their predecessors; but untrained by the companionship, the experience, and the example of a well-disciplined army. The first American volunteers learned a practical lesson under English soldiers: the existing volunteers learned theirs in holiday processions and festivals of periodical self-glorification.

The Colonists know these things. Their commercial knowledge has proved to them the benefits attending a due division of labour. They know that fighting and trading are quite distinct operations. They say—

‘What

‘What could you in England do even with your Volunteer army unsupported by regular troops? What could you do without your regular army? And what could we do towards supplying a Volunteer army when we have not one-tenth the number of men to a square mile that you have—and our volunteers are separated from each other by ten times the distance which separates yours? Have you ever compared the areas of Canada and Australia with the area of England? Do you know what extent of ground a defensive army in either of these vast dependencies would have to cover? What available defence could be expected from a population amounting altogether, in one country, to one million persons, spread over three million square miles; in another to two millions, spread over three hundred and fifty thousand square miles? Unless we have aid and direction from you, we must succumb to the attacks of a powerful aggression, whether neighbouring or remote.’

There is much truth in this. Soldiering in these Colonies is not, and for many years cannot be, the constant occupation of any considerable number of men. The inhabitants are not only too much engrossed by their own occupations, but they are too scattered and distant to learn much of the theory of soldiering in time of peace, or its practice in time of war. And it is not true that the payment of the defence of our possessions is borne by the English tax-payer without consideration or in an undue degree. As we have shown, the British tax-payer in no small degree profits by colonial wealth. His manufactures are consumed by the Colonists—his poor-rates are diminished by colonial immigration—his family incumbrances are alleviated by colonial employment—frequently his own resources are increased by the periodical remittance from some colonial investment, or by contributions from some colonial relation, who, instead of ‘loafing’ at home, is prospering abroad. One most striking instance of the Imperial benefits derivable from a colony—a colony, too, which could under no circumstances adequately defend itself—is furnished by the now noted Bahamas. We believe we may justly estimate at millions of pounds sterling the value of the commerce which, through this medium, has been carried on within the last two years between England and the Southern States. Nassau has, in fact, supplemented the ports of Liverpool, Bristol, Cardiff, and Glasgow. The vigilance of a belligerent force has been in a great degree neutralised by the convenient contiguity of this obscure little harbour to the blockaded harbours of Charleston and Savannah. Half the advantages of the existing trade between England and the Confederate States, England owes to this little community of Bahamian ‘wreckers’ and storekeepers. Without its aid the English goods shipped to the South, and Southern  
cotton

cotton shipped to England, could in no instance have escaped capture. No cost of military defence could be considered as too great for the maintenance of a Colony enjoying so advantageous a position. And, generally speaking, there is to our mind an equation between the cost and the profit of these possessions. If we forego the cost, we must make up our minds to lose the profit. The profit may be circuitous and indirect; but it is no less real for that. And we may also make up our minds that others will be very glad to clutch what we abandon.

Of course, we do not mean to imply that their protection by England should ensure exemption from any attempt at self-defence on the part of the Colonies. Neither do we apprehend that, in case of attack or invasion, the Colonists would be wanting in the pluck, patriotism, and sense of right, which urge men to defend themselves. However inconvenient it may be to submit to military training, the total neglect of it must incapacitate the Canadians from acting manfully in defence of their country; and we were glad to learn, from Mr. Fortescue's speech in the House of Commons on the 28th of April last, that the number of volunteers is on the increase, and that skilful officers and non-commissioned officers are to be supplied by the Government. Manifestly if Canada is overrun by an invasion from the Northern States, it will be a poor consolation for her to reflect that defence was not so easy for her as some English politicians supposed. We are speaking now of what England would lose in losing her Colonies; we do not discuss in detail the infinitely greater loss which the Colonies would undergo in being severed from England. All that we contend is, that they should not at present be expected to rely on their own unsupported efforts; and that they should not be 'nagged' by continual sneers at their short-comings. It was this systematic 'nagging' which soured the minds of the old American Colonists, and hardened those antagonistic features which ancestral persecution had stamped on their characters. Encourage them—animate them by your example—and, depend upon it, they will do what they can.

We have been speaking mainly of Colonies settled by men of exclusively English birth. But the same remarks are in a nearly equal degree applicable to islands like the West Indies, peopled by alien and dissimilar races. It is by this time, we should imagine, almost clear to the capacity of the most fanatical Radical and Quaker (even without the experience of a recent significant disturbance in St. Vincent's) that it is not safe to put arms in the possession of the coloured natives of English Colonies. We are not unfriendly to the negro Creoles.

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We agree entirely with those who hold that—though naturally docile, courteous, kindly, and submissive—they have too frequently been warped by the precepts of their sectarian teachers, since Emancipation, and by the inevitable though tardy sentiment of ‘race,’ into insubordination, sulkiness, and discontent. To withdraw all Imperial troops from these islands, and to throw their defence upon a race which its religious teachers have inflated with an overwhelming sense of its importance and capacities, would be, in effect, the same as to drive the English planters out of them; to substitute for the mild sway of English principles the ephemeral tempest of anarchy, and, in the end, to transfer the degenerate and demoralized negroes to the dominion of some Power less gentle and less benignant than that of Great Britain.

There is another class of Colonies, of which we speak with greater hesitation. We find it difficult to defend the occupation of territory on the coast of Africa—settlements like Sierra Leone and the Gambia—by any just economical argument. They are kept up simply with the philanthropical view of checking the slave-trade. And it is doubtful how far the experiment of settling liberated Africans in English Colonies has improved the character of the former or the condition of the latter. The best argument for retaining these possessions is founded on the means with which they supply us for recruiting the black regiments who garrison the West Indies: troops far less expensive to the Imperial treasury than white soldiers would be, and far more faithful to their trust than Creole soldiers.

We are told by some that we ought to withdraw the Imperial forces from the West Indies. But it would be far better to give up those islands altogether, than to retain them in that normal uneasiness which must result from the absence of the only symbol of power which impresses the minds of a semi-civilized and uppish people. From all that we have heard of a black police, we would rather be without than with its services. The black soldier from Africa, as being better disciplined and less fettered by local associations, is of some use in keeping down mobs and tumults; the black police, in addition to being inert, are partial and unfair. Should the Imperial forces ever be withdrawn from the West Indies, only one alternative to the abandonment of these islands remains for the white inhabitants; and that is, their formation into corps of volunteer cavalry, with the right of shooting down the first leaders in any outbreak. For their own sake, we hope the Government will not impose upon them the incompatible obligations of the Colonial Reformers and the ‘friends of the African:’



African:' will not take away their protectors, and then prevent them from protecting themselves.

That a better system of defence for the Colonies might be organized, we do not deny. But we are now discussing a question of principle, not of detail. Probably a great improvement, involving comparative economy, would be to leave the defence of Colonies more to our naval and less to our military forces. This, of course, is a subject which may well deserve the consideration of statesmen. But we do protest against that double fallacy which—irrespective of the grave objections which are raised by the natural and indestructible antipathies of 'race'—sees in the volunteers of the old American Colonies only a force friendly to Imperial power and loyal to the Imperial connexion. We ask our countrymen to look at the whole Colonial question in its widest relations, and not to make it a matter of debtor and creditor account between England and this or that colony. Regard all the Colonies as remote parts of England, and enjoying different degrees of wealth and productiveness—all as yet imperfectly developed—all susceptible of much greater development; and then, looking to the advantages which they now offer and the prospect of other advantages to be gained hereafter, ask this question,—Is the 3,342,000*l.* of their direct military expenditure, or the 6,000,000*l.* of their total possible military, civil, and naval expenditure, too large an outlay for us to incur in return? and if it is too much, on what ground can we defend the military expenditure which has been within the last eighty years lavished on Ireland? If the argument of proximity, on which our Colonial Reformers rely so much, is of any weight, surely it ought to have more weight with respect to a part of the empire now only eight, and never within the last half century more than thirty-six hours distant from the metropolis of England. If the intrinsic value of the object to be protected is to decide the question, surely it is as much worth while to defend young settlements of loyal Englishmen on one side of the Atlantic, as it is to keep turbulent Celts in subjection on the other? If it is contended that Ireland in other hands and under another Power would be dangerous, we would ask, is there no danger in the hatred and resentment of a people, who regarded themselves as part and parcel of ourselves, turned adrift with scornful indifference? Though it may puzzle us to lay down with minute precision the exact value in current coin of the domestic tranquillity which the possession of colonies gives us, it is not so difficult for a thoughtful man to decide whether the gain is, on the whole, too little, and the outlay too lavish.

We have already alluded to the classes of men who live an  
industrious

industrious and thriving life in the Colonies, instead of remaining discontented at home. Is there no gain in this? Is it better to pay six millions or more for the maintenance of Colonies which prevent disturbance at home, or the same sum for the suppression of such disturbances always reviving, and always crying to be suppressed? But suppose the Colonies gone. What then happens? Given the same adventurousness of disposition, the same necessity both for the play of energy and the acquisition of wealth which seem to distinguish our stock, and place the Englishman anywhere out of the limits of European jurisdiction; place him on the Indian peninsula, on the African continent, on the Islands of the Indian Ocean, or the South Pacific. Trace his career. If he is alone, he plies his trade with an industry, and steadiness, and integrity which surprise and conciliate his rulers. His thrift brings riches. His riches increase, and invite competition or participation from the mother-country. Englishmen pour in. At first humble, modest, and obedient, they devote themselves with steady energy to the prosecution of their craft or commerce. They do not interfere with the politics or the religion of the country which affords them protection and a home. They submit implicitly to the laws, whether of the Statute-book or of prescription. They are equally slow at giving or taking offence. Rather than wound the susceptibilities of a superstitious, or the jealousies of a barbarous, people, they confine themselves strictly within the narrow area designed for them by the suspicious policy of their alien and Pagan Government. They remain cooped within the close precincts of a mud fort or walled factory, rather than trespass on the adjoining territory for the purpose of amusement or fresh air. They are traders, manufacturers, prosecuting a quiet, industrious, and not unprofitable vocation. By and by their numbers are still further augmented from England. The factory or the fort is too small. The restrictions imposed by foreigners are found to be galling and irksome. The conditions which one, two, or ten Englishmen found reasonable, are declared to be oppressive and insulting when dictated to one hundred or five hundred. This feeling once aroused, occasions for its manifestation are neither difficult nor rare. A more defiant air takes the place of the modest submissiveness formerly displayed. A desire not only to resent but also to imagine affronts, shows itself from time to time. The factory is too circumscribed; the fort too close and unhealthy for the aspiring genius of Englishmen. The territorial bounds are soon passed. Condonation or oversight leads to additional and more startling infractions of laws formerly obeyed without hesitation. Inquiries are made, warnings given. But

But warnings and inquiries provoke only evasive excuses. Subterfuge is soon exchanged for defiance. Collision occurs. Probably the occasion is so well timed that, aided by the natural defences of the place, a few score of hardy Europeans succeed in repelling hundreds of barbarous assailants. The invaders retire ; but confidence between the two races is gone for ever. The walls of the fort are strengthened ; perhaps its circuit enlarged. But the inconvenience of mutual distrust soon becomes perceptible. The gallant band which, on its own ground, was triumphant against desperate odds, cannot live for ever within close walls. Neither can they go out in full numbers without provoking hostilities which they are hardly prepared to face. A few venture beyond the walls with impunity. No one questions them or orders them to return. The adventure is repeated, but the impunity is no more. A few wounded fugitives gallop back to the humble fort, and startle the unprepared garrison with the tale of a surprise and a discomfiture. From that day there is war between the two races. The fort is more strongly garrisoned, and more rarely quitted than before. Stragglers and solitary rambles are captured or butchered close to the walls of their small city. Communication with the shore becomes more difficult, and almost impossible. The vengeance of the natives becomes more active and more stern. Finally, the beleaguered garrison wage a war of unequal defence against a race conscious of its power and jealous of its honour. It may be that internal divisions among the barbarians themselves give a protection and an importance to the alien settlers, by forcing them to be the allies of one faction or the other. A necessity of this kind, however grateful it may be to their pride, is no guarantee of their safety. In the end the result is the same, whether beleaguered by overwhelming numbers of combined barbarians, or fighting as the allies of one barbarous people against the other, they are equally enfeebled and diminished. Then comes the inevitable appeal to England and Englishmen. Our countrymen are waging an unequal contest against heathen tribes in distant lands ; they are overmatched and defeated in a country where defeat brings certain captivity, and captivity is darkened by atrocities too horrible for contemplation. Such an appeal is rarely made in vain ; either private adventure or public spirit equips an expedition ; the new allies land, fired by ambition, by revenge, and by fanaticism. A new war ensues : ultimately, victory rests with European discipline and resolution. A peace is made ; treaties guarantee an accession of domain ; the factory and the fort expand into a territory, guarded by a military force ; success so insulting provokes the baffled enemy to treachery and fresh

fresh aggression; but in vain; the strong iron hand of the Englishman is on the country, and cannot be shaken off; his strength and his territory increase; the few miles near the shore have grown into hundreds of square miles; the permissive settlement of tranquil and modest traders has swelled into a colony—a principality—or a gigantic Imperial fief, with its cavalry and artillery, its civil and judicial officers, all the state, paraphernalia, and expense of a proud and ambitious dependency.

Or, take an alternative case, neither improbable nor unprecedented.

A number of English adventurers settle in a half-populated and semi-barbarous country. They acquire land from the savage natives, and soon desire to acquire more. They make compacts, which, through ignorance on one side and cupidity on the other, are repeatedly violated. Each successive violation provokes resistance, and resistance provokes further encroachment. The English, strong in combination, confidence, and discipline, determine on maintaining what they have acquired, and end by enlarging the limit of their possessions. The savages, angry, but beaten and cowed by superior organization, attempt to recover by treachery what they have lost in battle. Frightful massacres are planned, of which only some are perpetrated. The settlers, exasperated and alarmed, proclaim a war of extermination. The resources of science and the arts of strategy are employed to extirpate a foe whom it has become easier to destroy than to subjugate. Frightful atrocities and ruthless retaliation mark the progress of English conquest. It then becomes a serious question whether the English name is to be tarnished by the crimes of an unauthorised and independent aggression, or to be vindicated by the clemency of a regular but dependent government. To such a question only one answer can be given. Neither the sympathies of the English people nor the traditions of the English Parliament will permit a war of extermination to be waged against savages, however cruel or ferocious. The English Government is called upon to intervene between the authors and the victims of a sanguinary strife. The intervention is accorded; but its very concession involves the creation of a Colony and the inauguration of a Colonial Government. Not that the creation of a regular colony can absolutely put an end to such evils as we have spoken of, but it affords the only chance of confining them within any limit at all.

Thus Colonies are called into being, and are maintained, not only for the preservation of British interests and property, but for the limitation of British aggrandisement and the protection of the helpless, ignorant, and oppressed.

Such

Such is the sketch of what has been done, and may be done again. And how can it be prevented? Can we quench the spirit of adventure which burns within the breasts of Englishmen? Can we forbid our countrymen to settle in remote lands, and amid savage nations? Can we forbid them to profit by their superiority either of skill, intelligence, and industry, or of boldness, combination, and defensive courage? In a word, can we compel the countrymen of Drake, Cavendish, Raleigh, and Clive to forego the traditions of their race, and to adopt the policy and the principles of those who believe the whole duty of man is divided between spinning cotton and selling it?

The thing is wholly impossible. So long as Englishmen are Englishmen, so long will the love of enterprise and adventure lead them to remote and unfriendly regions, to the subjugation of savage tribes and savage forests, to the settlement of disturbed territories, and, as a consequence, to the foundation of colonies.

There is indeed one course open to us: we need only state it, and submit it to the judgment of the country. We can leave the vanguard of these self-relying rovers to make their own settlements as best they may, without aid or co-operation from England. We can leave them to perish in the first attempts to establish a factory and a market; but even this wise and politic neglect may not succeed in killing those whom we abandon. In spite of neglect and desertion, indifference and contempt, New Zealand and Southern Africa may grow and thrive as the New England States grew and throve before.

But has experience proved this to be the truest policy after all? It was inexpensive enough, Heaven knows. We left for many generations the colonists of North America to make their own way as best they could, to maintain a war of controversy with the Lords Proprietors and the Crown, and a war of arms with the wild Indians. They knew little of us till their militia saw English Guardsmen outwitted by the strategy of the Delawares on meeting in the array of battle the forces of Montcalm. Persons who have studied the history of those days know that the Colonists looked on the English troops with that mixture of admiration, curiosity, and jealousy with which men regard strangers and aliens, rather than with the warmth and sympathy with which they receive men of the same blood and lineage. And there was reason for this: the Colonies had grown up apart and distinct from England; the Imperial Government had done little for them in the aggregate; the points of contact between them and the mother-country had been points of collision rather than of sympathy. Such communication as the citizens of many of the Northern and Eastern States kept up was of a narrow and  
sectarian

sectarian kind: it was with the Nonconformists or Republicans of England—with certain sects in certain localities—rather than with the body of the English people, that they had the most frequent correspondence; and, save here and there the visit of a cadet of some Cavalier family to his kinsmen in Virginia or Carolina, the representatives of England whom the Southern States were accustomed to receive were not members of the most respectable classes. Altogether, the inaction and indifference of England as regarded her American Colonies tended to create and foster social habits and political notions not perhaps hostile to those of England, but certainly different from them. The independence of the Colonies had become a social and moral fact before it received a political recognition; and its political recognition was the ultimate result of a feeling long and generally predominant in the Colonial mind.

It may be or may not be that the loss of the American Colonies was an injury to England. This is an open question. But there can be no question at all that the manner of their separation was then, and has since been, highly injurious to us. And it must never be forgotten that the previous estrangement gave its tone and colouring to all the circumstances preceding and following that separation. The devout regret expressed by some of the leaders of the Revolution that the policy of Great Britain had not suffered them and us to grow up one great people together, was, we suspect, unshared by the mass of American colonists, whose sentiments were Provincial, not Imperial, because their whole previous training had been not Imperial, but Provincial. They reflected the habits of thought common to the sectarians and middle classes of England, unmodified and uncorrected by the manners of a superior class, or by the authority of venerable seats of learning. They had not an English, but a Colonial way of looking at things. They had few common points of interest with this country, and the native tone of thought was independent and antagonistic on most questions of civil and religious polity. A divergence so great at starting was more likely to widen than to contract, after the commencement of an open rupture. He would be a bold man who should assert that it has contracted.

There is no offence which either nations or individuals are so little likely to forgive as insult or contempt. A positive material injury may be forgiven; but contempt, never. It is recorded that when the Royal and the Revolutionary troops came into collision at Breed's Hill, the latter cried out to the nearest English colonel, 'Colonel Abercrombie, are we cowards?' A taunt uttered carelessly in the English Parliament, and repeated a hundred times in violent pamphlets, had  
rankled

rankled deeply in the Provincial breast, and the recollection of it could be effaced only by bloodshed. The same feeling of wounded self-esteem may be perpetuated in the breasts of our Canadian and Australian fellow-subjects. To tell the Colonies that they are of no use to us—that we don't care for them—that we can do better without them—is to insult them in their tenderest and weakest point: for they dearly love the English connexion—they are proud of it. They speak of England as their 'home'; they send their children 'home' for education; they point with delight to them when they have been educated 'at home'; they have imported their habits of life and their habits of dress from England; they have closely imitated our public and political customs; they have their Parliaments, their Queen's Bench, their Speaker, and their Chief Justice. The forms of the English Parliament are the forms of the Australian Parliament; the law of the Queen's Bench at Westminster is the law of the Queen's Bench at Sydney; the tenure by which an English Ministry retains power is the same as that by which an Australian Ministry retains it. That there are points in which the Colonies differ from England, and in which we could wish that they did not differ, is too true; but there remain phases of resemblance strong enough to make us earnestly deprecate any rupture of our present connexion: above all, an arrogant, contemptuous, insulting rupture.

To bid these and other colonies go—what would be the results of such a step? They would be no less costly to our resources than humiliating to our pride. The people so cast off would carry with them, not a grateful memory of the connexion which we had dissolved, or of the benefits which we had formerly conferred, but a vindictive memory of the slight and indifference which had accompanied and embittered the dissolution. If strong enough, they would establish an independent Government, the first principles of which would be hatred and antagonism to England. If too weak to do this, they would attach themselves to some strong European Government desirous of possessing colonies, and credulous of the advantages derivable from their possession. And we may rest assured that this desire and this credulity are common to more than one nation. Spain has never ceased to sigh for what she has lost, and France has never ceased to envy what we have acquired. French orators and statesmen have over and over again descanted on the easy escape from popular convulsions which England has obtained in her distant dependencies. The colonization of Algeria and of New Caledonia—humble imitations as they may be of our efforts—are tributes to our good fortune. Nor should it be forgotten that in certain respects

respects France, as a colonizing Power, has succeeded where we failed. France may not indeed have planted settlements where the people so soon acquired wealth as in our colonies; but in colonizing Canada she left a more true antitype of her contemporary self than any English colony has preserved of contemporary England. She formalized her colonies, as she has since formalized her constitutions; and that the former have not more exactly corresponded to her grand designs, may be attributed not perhaps to the inferiority but to the contentedness of her colonists. France—and especially the French Emperor—desires still to colonize; and we do not think that she would willingly forego the chance of bringing within her orbit an erratic satellite flung away from the colonial system of Great Britain. She knows well enough that a dependency already settled by some thousands of English artisans and labourers would, in an economical point of view, be the nucleus of a far more profitable possession than any planted by an unmixed French population; and the facility with which the American people, at the period of independence, adopted French ideas and French phrases, assures her that other English colonists would readily put themselves under the code of her laws and the protection of her flag.

We do not wish to exaggerate the loss or inconvenience to England which would be caused by such a transfer. By itself, it would not, perhaps, be of very great moment—at least, not in the eyes of those who regard economical results alone. Still, even in their opinion, it would entail material losses and grave inconvenience. With a foreign dominion and foreign protection would come a hostile policy and anti-English tariffs, to which some of the colonies are already sufficiently inclined. The spirit of offended nationality would combine with the spirit of hereditary hostility. Heavy duties would be imposed on English goods; a jealous eye would be kept on English residents, or prohibitions issued against the residence of fresh immigrants from England. Those who had been born in the Colonies, or had been first protected and then abandoned by us, would have to carry on their business, not, as heretofore, under the protection of their own flag and their own law, but under the menace of an alien flag, and under an alien law administered in an alien tongue. And this law and this tongue would become the inheritance of their children and the badge of their subjection.

This would be sufficiently sad and humiliating, but, by itself, it might not much affect the interests or the pride of the people of England. A few might feel the humiliation, while the mass of the population did not feel it at all. It would not, however, be a solitary or inconsequential injury. It would only be after  
this



this double act of desertion and self-humiliation had been fully accomplished, and when we looked round to see what the world thought of it all, that we should learn what it is to lose the respect of our neighbours. As to the reception of the act there can be little doubt. We should awake from our little game of selfish economy, dinning by the tumultuous outburst of derision and reproach, the unparalleled vehemence of which would hardly equal the baseness of our treachery and our cowardice. We should, indeed, have fewer miles of sea and land to guard; and we should be saved the expense which their protection necessitates. But we should learn how much costlier than gold it is to maintain order and content in a polity the citizens of which have ceased to be respected by others and to respect themselves; and we should learn by a double experience how bitter is the enmity of alienated and exasperated friends.

There is one class of dependencies our desertion of which would be flagrantly mean and treacherous—we mean our tropical colonies. In these alone does the black or the mulatto enjoy the reality of that freedom, the shadowy name of which is his privilege in the colonies of other European States. In the colonies of France his pretended liberty does not shelter him from many burdens and some annoyances. He has exchanged subjection to a private master for subjection to the State. The State is now his master, and holds him at its disposal to order about, to send here and there, just as it chooses. Are immediate additions required for an expedition to Vera Cruz? a brigade of free black ‘concitoyens’ is despatched at once from Martinique or Guadeloupe. Are public works undertaken for which an immediate supply of fresh labour is demanded? the black ‘concitoyens’ must show their gratitude to the country which liberated them by a prompt assent to the task, the wages and rations fixed by a paternal administration. The French negro must never forget what he was; he must not presume to ape the airs and demeanour of his former masters. He must doff his hat to the white man, must get out of his way on the roads, and must not aspire to any participation in public employment, save the most menial, or of public voting, save of the most submissive kind. He must always be prepared to explain how he gets his living, on pain of being set to work by the Government. Perhaps, all things considered, this is better than the negro’s life in the northern part of the United States. There he is recognised as a free man by a Constitution which proclaims all men to have been born equal. But his freedom is mutilated and circumscribed in all directions. He is not, indeed, held to be the servant of the State. He cannot be marched off to build bridges

or macadamize roads. He is not bound to show his pass or give an account of himself, or explain his means of subsistence, at the nearest police-station, or to take off his hat to every white man he meets in the streets. But he has no free agency. He cannot adopt any business or profession that he chooses; he cannot be an elector, except under very stringent limitations; and as for becoming a Member of Congress, he might as well claim to succeed to the empire of China or an estate in the moon. But more than this, and worse than this, he must be content to be regarded as an outcast and a pariah by the drab-coloured philanthropists of Philadelphia and the Celtic aristocrats of New York. Not only is he not politically the equal of the white man, but he is socially far his inferior. He pays for his nominal freedom by an amount of hatred and contumely which is wholly unintelligible on this side of the Atlantic. His freedom bears a bitterer fruit than the slavery of his compatriots in the South; for the slave in the South is often the pet of his master, and is caressed with a fondness which would not be lavished on an equal or a rival race; while the negro at the North has to bear the whole pressure of that galling contempt with which men who have a certain position sneer down the attempts of those who vainly aspire to attain it. He is the victim alike of German rudeness and Irish brutality, and the practical aid which he obtains from his Abolitionist friends is of the slightest and coldest kind. His career is that of a poor devil born to be a waiter, a barber, or a porter; to be shut out of omnibuses and churches, jostled in the streets, and sworn at as an unseasonable intrusion on the everyday life of mankind!

How different his condition and prospects in the British Colonies! *There* his freedom is as secure in fact as it is admitted in theory. He is free to choose his own line of life, and fix the remuneration of his own labours. Not only a professional but an official career is open to his ambition. American visitors to the West Indies start to find the public peace maintained by black policemen, public justice dispensed by black magistrates, criminal trials proceeding before black jurymen, and sometimes laws passed by black members of the Legislature.\* It is not for us to say whether this recognition of negro equality has not been premature, and caused by a generous impulse rather than from ripe reflection. We know it is not popular among the white inhabitants of our tropical colonies, who regard it as

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\* While touching upon the subject of the administration of justice in the West Indies, we would call attention to the simple and exhaustive system of civil procedure, framed by Sir Benjamin Pine, Lieutenant-Governor of St. Kitts, to relieve that colony of the complicated technicalities of English law.

unjust to themselves and as not merited by the negroes. Be this as it may, it is a fact, and a great fact, that in the dependencies of Great Britain, and in those dependencies alone, the negro and the mulatto are allowed to compete with the white man for the prizes of professional, mercantile, and official life. The tropical dependencies of Great Britain open to one million of men of every hue, from the deepest black to the lightest coffee-colour, the opportunities of wealth, elevation, and distinction; while six millions of the same race in the United States and the colonies of France or Spain vibrate between the condition of petted slaves and free pariahs. We admit that this English liberality is opposed to the prejudices of many among the white population. The middle and lower classes of English in the Colonies—those classes, in fact, which alone see much of the coloured races—are just as much prejudiced against them as are the mobs of New York and Philadelphia; and we fear that there is less than there might be in the manner and deportment of the present generation of the free coloured races in America or the British Colonies to conciliate the attachment and good feeling of the whites. Still, despite the prejudices of its own subjects—despite the pertness, insolence, and incredible self-conceit of the coloured populations of African descent,—the British Government champions and protects these races, and educates them by kindness, by self-government, and by privileges, to the high responsibilities of Christian civilization. Grant everything that is said about the shortcomings of the free negro and his mulatto kinsman (and though much is exaggerated, much may be said with truth)—say that he is ungrateful (which is far from being universally true)—grant that he has degenerated in genuine courtesy and kindness from his servile forefathers (which is in many cases true)—grant that his self-conceit and self-assertion, combined with his laziness, his dilatory and imperfect style of work, and his indifference to the interests of his employer, often make him intolerable—yet are these shortcomings sufficient to justify a great nation in abandoning her own most distinctive policy, and allowing one million of human beings, whom she has wholly redeemed from slavery and partially redeemed from barbarism, to relapse, after an experiment of twenty-five years, into the slothful sensuality of Hayti or the primitive savageness of their African villages? Surely, if the spectacle of a great work left incomplete is more mournful than the reflections suggested by a great design never undertaken, there could be no spectacle more painful to the philanthropist than the gradual barbarization of the African Creoles redeemed into partial civilization by the benevolent policy of England.

England. Let England—contented with an economical plea—once withdraw her protection from her West India Colonies, a protection which costs her less than half a million sterling a-year, and they fall at once under some foreign Power. It is immaterial who this Power is, whether France, Spain, Holland, or the United States. From the moment that the Creole negro or mulatto passes under this new dominion, he sinks from the proud eminence of civilised freedom into a degradation as humiliating as slavery, but unrelieved by those compensations which often temper slavery. Nor is it easy to foresee the full amount of horrors which would result from this terrible revolution. The negro Creole is the descendant of various and dissimilar races; some warlike, spirited, and revengeful; others (perhaps the majority) inert, timid, unaggressive. But civilization before emancipation, and the enjoyment of civil rights since emancipation, have made the bold bolder and the timid less timid. Strangers seeking to impose new ordinances and greater restrictions upon the free coloured people of the British West Indies, would find that they had erroneously calculated on the timidity of a people who appreciated freedom sufficiently to fight for it. The savage resistance offered by these tribes to the reimposition of a dreaded yoke would revive the atrocities and the crimes of the Maroon war of days gone by. Either the negroes or the Europeans would in the end be extirpated; in either case a mortal blow would be struck at civilization. The negroes left masters of the field would inaugurate a polity which must eventually repeat all the worst features of the Haytian Republic. The whites, bereft of negro aid, would have to renew the slave-trade, under another name, for the supply of that labour which in the tropics is indispensable to agriculture and domestic service. But we forbear to pursue this part of the subject further, knowing, as we do, that the curious revulsion of English feeling in regard to the negro race makes any allusion to their fate appear irksome and importunate.

It remains for us only to briefly notice the arguments founded on the incongruity between the actual state of the British Colonies and the standard of their theoretical excellence. We recur to the old plea of confession and avoidance. We admit many of the allegations advanced; we deny only the inferences deduced from their admission. We admit that we have not so much reproduced as travestied the English Constitution in Canada and Australia. We admit that the Church in the Colonies is oftener a slip of 'feeble Anglicanism' than a sturdy branch of the old Church at home. But we cannot recognise in these facts any good reasons for abandoning the Colonies. On the contrary, these  
seem

seem to us to prove the necessity of making the connexion between England and her dependencies even closer than it is. The Legislative Council, and the whole constitution of the Colonies, are more democratic than with us, because there do not as yet exist the elements of an aristocratic class. The majority of the colonists either were themselves or are the sons of men who at one time of their lives were day-labourers or artisans. They have attained to wealth, but they have never acquired education, or the manners which can only belong to a fixed social position. Moreover, in the present scarcity of population, the possession of land does not confer the same status which it does in old and densely-peopled countries; and it is continually changing owners. But as the country becomes more populous and more wealthy—as profitable investments for capital offer themselves—a higher class of settlers flows in, with better education, ampler means, and more refined manners. By degrees a class springs up superior to the rest, not only in property, but in those attributes which make property respected. Knowledge, manners, and property combined, constitute a natural aristocracy. And it is hard to suppose that an aristocracy which to these elements of influence adds English pluck and resolution will not win political power for itself. The examples of the United States, of New South Wales, of Victoria, and of Canada, present grave warnings of the contrary tendency. But we believe that an aspect of things which is normal in the United States is temporary and transient in our Australian and American colonies. In the United States—at least in the Northern part of the Union—the career of a public man and the character of a politician are held generally in disrepute. To be a Member of Congress and an influential leader of parties by no means proves a man to be honest or respectable. The vague phraseology of the American Constitution, and the loose morality of universal suffrage, explain this. The increasing licence of successive years further explains it. The mob—indeed, the lowest portion of the mob—has got the whole political power into its hands; and the tendency of each year's immigration is to swell the numbers and the power of the mob. In Australia the immigration is not so uniform in character. There are gentlemen colonists in that dependency. At present they are outnumbered and outvoted. But there is the nucleus of a less degenerate party, which will become more powerful with the progressive settlement of the colony, with the accumulation and distribution of wealth, and with the division of labour. But—what is of still greater moment—there exists among the richer Australian colonists a strong Conservative feeling. Many of them are fully alive to the mischiefs and dangers

dangers of universal suffrage, and the political system which it creates. They know that these evils need not be more than temporary; and they are anxious to abbreviate the necessary term of their duration. A still more hopeful sign is the Conservatism of the poorer class of voters themselves. Poverty is everywhere comparative. The poverty of the Australian labourer is competence and almost affluence contrasted with that of his English compeer. And it is astonishing to see how imperceptibly Conservative a class becomes which never feels the pangs of indigence, and which has the opportunity of acquiring opulence. Whatever the shibboleths of party disputes in the Australian colonies may be—whatever the Radical cries imported from England—the mass of the people are as Conservative as a love of property and a respect for property can make them.\* Whatever the political or social dangers, arising out of the power of the mob, may be in Australia, it is certain that they are more likely to be increased than diminished by a severance of the colony from England; for every year adds to the education and self-respect of those English classes which resort to Australia while it is an English colony, but which would resort to it less frequently, or not at all, did it cease to be an English colony. And every year also adds to that love of England and English traditions which temporary distress may deaden or temporary exasperation may sour, but which it is difficult to kill outright in any English bosom. While England and her colonies are parts of one empire, her emigrants will go forth carrying with them that love of country and that pride in her greatness—that devotion to the person and the authority of the Sovereign—which every national crisis, from the Indian mutiny to the death of the Prince Consort, and the recent distress in our manufacturing districts, has signally illustrated. If these dependencies be severed from England, her emigrants will be the irritated and disgusted classes of her people, going forth to leaven the fermentation of Australian discontents with their own bitterness, and to assist in perpetuating a rancour which will end in making the rupture irreparable.

On the whole, then, what should we gain by the emancipation of our Colonies from the gentlest and easiest sway ever exercised? We should save some millions a year on the Army and Navy Estimates. We should have some millions a year which we now spend on Colonial defences by sea and by land. That would be our gain. But what should we lose? The friendship and devo-

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\* Even while we write, we learn that in Victoria an important effort has been made to correct the evils of manhood suffrage. This affords a remarkable instance of 'Power redressing its own abuses.'

tion of millions of fellow-subjects in every sea, proud to be citizens of this great empire, and to feel that its highest prizes are open to them and to their children—the friendship and alliance of great nations now in their first germ—and let us not forget to add, markets which now annually consume thirty million pounds' worth of our goods. But we should lose something more valuable and indispensable—the esteem and honour of all nations, who have looked to us as the great colonizers of modern days, as the people who were to found an empire no less compact and firm than that of ancient Rome, no less brilliant and heroic than those scattered but ephemeral communities which bore to alien shores and barbarous tribes the meteoric light of Grecian genius and art. We should exchange the loyal devotion of willing subjects and allies for the deep-seated antipathy of involuntary aliens, and should have the misery of reflecting that the contempt of some States and the hatred of others had been earned by our meanness and our cowardice.

We trust that a better fate is in store for us. The day may come when rich, populous, and self-dependent colonies, grown into nations, will claim a dissolution of partnership. When that day comes, let us part in peace. But till then, let us fulfil our appointed task, by laying carefully the foundations of civilised, peaceful, and friendly nations. Let us not inflict that wound upon our own social order and prosperity which would follow the abandonment of those great fields of enterprise, or that deeper wound on honour and good faith which would be struck by the desertion of the helpless and confiding.

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ART. V.—*The Life and Letters of Washington Irving.* By his Nephew, Pierre E. Irving. 3 vols. London, 1862-3.

OF the three volumes as yet published of the 'Life and Letters of Washington Irving,' two only appear to have had the entire supervision of his nephew, whose name appears on the title-page. The third closes with a chapter containing some correspondence of the deceased author with an English family, introduced with the following note:—'These original letters and anecdotes were received too late to be incorporated in their proper place in this work, but have been considered too interesting to be omitted. There has not been time to communicate with Mr. Pierre Irving, that he might insert them.—E. P.' The reader is not informed on the title-page or elsewhere, so far as

we have observed, to whom these initials belong, and the mystery of this kind of double editing must remain therefore for the present unsolved. In the mean time, as there are no indications that the work is about to be soon completed, and as, with the third volume, as much of the career of Washington Irving as is likely to have any special interest for English readers terminates, we have thought that our notice of the work before us should no longer be delayed.

Washington Irving was born at New York in 1783: the youngest of eight children (who grew up) of William Irving, an Orkney man, who settled in America in 1763. William Irving had served on board one of the English mail-packets between Falmouth and New York, during the war which ended in that year. He married a Falmouth girl, our hero's mother; and had it not been for the celebrity of his son, the world would probably have remained unenlightened as to his genealogy. But our author was pleased in after life at making the discovery that the Irvings of Orkney were a clan of very respectable antiquity: and after sundry investigations he obtained through Mr. Robertson, sheriff substitute at Kirkwall (who had made a contribution on the subject to Mr. Dennistoun's interesting '*Memoirs of Sir Robert Strange*'), 'a symmetrical and regularly attested table of descent, carrying his lineage through the senior representatives of the name to Magnus, of 1608, the first Shapinsha Irving,' through him 'to the first Orkney Irvine and earliest cadet of Drum, William de Erwin, an inhabitant of Kirkwall in 1369, while the islands yet owned the sway of Magnus V., the last of the Norwegian Earls,' and so, ultimately, to the famous 'secretary and armour-bearer of Robert Bruce.'\* The far descended Orcadian, however, was in a humble condition of life: took to trade, in which he ultimately thrived, and became established in New York in the revolutionary time.

Throughout the War of Independence William Irving demeaned himself as 'a true Whig;' and his wife shared his partisanship. The victorious American army entered New York just at the date of the birth of our author. 'Washington's work is ended,' said Mrs. Irving, 'and the child shall be named after him.' William was also attached to the religious persuasion of his old country, and became deacon of the Presbyterian Church

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\* Mr. Pierre Irving says that this genealogy was prepared by its learned compiler, Mr. George Petrie, 'without a break, from the facility afforded by the Udal laws of Orkney, which required that lands, on the death of an owner, should be divided equally among the sons and daughters, a peculiarity which led, in the partition, to the mention of the names and relationships of all the parties who were to draw a share.'—p. 4.



in New York. 'A sedate, conscientious, God-fearing man,' says his son's biographer, 'with much of the strictness of the old Scotch Covenanter in his disposition.' From which over-strictness followed the usual consequences. His children seem to have taken for the most part to something of Toryism in politics, and all but one strayed over to the Episcopalian fold in point of religion. Washington himself 'signalized his abjuration at an early age, by going stealthily to Trinity Church, when the rite of confirmation was administered, and enrolling himself among its disciples by the laying on of hands, that he might thereafter, though still constrained to attend his father's church, feel that it could not challenge his allegiance.' We must add, however, that this seems to have been a solitary instance of serious disobedience. The Irvings were, in truth, a most united and most loving family. As our concern with the distinguished writer relates chiefly to his literary history and English connexion, we must needs omit the household details with which the pages of the biography before us are naturally filled. Suffice it to say, that they afford a simple picture of unpretending, honest, family affection, such as is not often witnessed in this selfish world: brothers and sisters mutually helping each other through their very chequered lives, rejoicing in each other's successes, and mingling sorrow and counsel in seasons of distress, with scarcely a shadow of selfishness, or reserve, or jealousy, such as are so constantly found to keep family sympathies apart, even where the hearts remain fundamentally sound. 'Brotherhood,' says Irving himself, 'is a holy alliance made by God and imprinted in our hearts: and we should observe it with religious faith. The more kindly and scrupulously we obey its dictates, the happier we shall be.' His whole life, adds his nephew, was an exemplification of this doctrine. His father died in 1807, at the age of seventy-six; his mother in 1817, after her son had emigrated to England.

Washington, as might be supposed from his after history, grew up an imaginative, impressible child, with quick tastes and ready sympathies, and a strong predilection for almost everything in turn except steady work, for which, throughout life, he retained the most unmitigated aversion. But his most real and most abiding passion was for travel and maritime adventure. The mingled blood of Orkney and Cornwall spoke out in his earliest years, and continued to impel him to restless locomotion at an age when most men have long ceased to travel except by their fireside. 'How wistfully,' he says in the Introduction to his Sketch-Book, 'would I wander about the pier-head in fine weather, and watch the parting ships bound to distant climes!—  
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with what longing eyes would I gaze after their lessening sails, and waft myself in imagination to the ends of the earth!' At the age of fourteen, says his biographer, this desire

'had nearly ripened into a purpose to elope from home, and engage as a sailor. The idea of living on salt pork, which was his abhorrence, was, however, a great drawback to his resolution; but with the courage of a martyr he determined to overcome his dislike, and accordingly he made a practice of eating it at every opportunity. It was another part of his discipline, by way of preparing for a hard couch, to get up from his bed at night, and lie on the bare floor. But the discomforts of this regimen soon proved too much for his perseverance; with every new trial the pork grew less *appetitious*, and the bare floor more hard, until at length his faltering resolution came to a total collapse.'—Vol. i., p. 14.

In early life this passion for travelling was only partially appeased by the imperfect solace of long wanderings in the forest world which in those days covered what are now the populous, in some instances the half-exhausted, fields of New York and its Border States. The following extract from a letter which he wrote at the age of seventy strongly expresses the feeling produced on an American by revisiting, in old age, the scenes of his youth. One might almost fancy it dictated by Khizzer, the Oriental wandering Jew, after one of his recurring visits at intervals of five centuries—scarcely equivalent in the slow East to five decades of years in the West:—

'One of the most interesting circumstances of my tour (1853) was the sojourn of a day at Ogdensburg, at the mouth of the Oswegatchie River, where it empties itself into the St. Lawrence. I had not been there since I visited it fifty years since. . . . All the country was then a wilderness: we floated down the Black River in a scow; we toiled through forests in waggons drawn by oxen; we slept in hunters' cabins, and were once four-and-twenty hours without food; but all was romance to me. Well! here I was again, after the lapse of fifty years. I found a populous city occupying both banks of the Oswegatchie, connected by bridges. It was the Ogdensburg of which a village plot had been planned at the time of our visit. I sought the old French fort, where we had been quartered: not a trace of it was left. I sat under a tree on the site, and looked round upon what I had known as a wilderness, now teeming with life, crowded with habitations, the Oswegatchie River dammed up and encumbered by vast stone mills, the broad St. Lawrence ploughed by immense steamers.

'I walked to the point where, with the two girls, I used to launch forth in the canoe, while the rest of the party would wave handkerchiefs and cheer us from shore; it was now a bustling landing-place for steamers. There were still some rocks where I used to sit of an evening

evening and accompany with my flute one of the ladies who sang. I sat for a long time on the rocks, summoning recollections of bygone days, and of the happy beings by whom I was then surrounded. All had passed away—all were dead and gone. Of that young and joyous party I was the sole survivor. They had all lived quietly at home out of the reach of mischance, yet had gone down to their graves; while I, who had been wandering about the world, exposed to all hazards by land and sea, was yet alive. It seemed almost marvellous. I have often, in my shifting about the world, come upon the traces of former existence; but I do not think anything has made a stronger impression on me than this second visit to the banks of the Oswegatchie.—p. 30.

We copy another bit of American scenery from his journals, because, besides the beauty of the language, it illustrates two of his tastes—the pictorial (he wanted at one time to turn painter, and always made artists his favourite associates) and the dramatic—which, however, he never had the opportunity of indulging beyond the limits of social theatricals, wherein he considered himself by no means a contemptible performer.\* He had got to the brink of one of the famous ‘terraces,’ sea margins, of undividable antiquity, which skirt at some distance the southern shore of Lake Ontario:—

‘I found myself on the brow of a hill, down which the road suddenly made a winding descent. The trees on each side of the road were like the side scenes of a theatre; while those which had hitherto

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\* Irving was a constant votary of the theatre in England in his early days, and, when he could find the opportunity, in America. He used to describe with much humour a scene between the audience at New York and Cooke in his tipsy days. ‘He was to play Shylock and Sir Archy MacSarcasm. He went through Shylock admirably, but had primed himself with drink to such a degree before the commencement of the afterpiece, that he was not himself. His condition was so apparent that they hurried through the piece, and skipped and curtailed, to have the curtain fall, when, lo! as it was descending, Cooke stepped out from under it, and presented himself before the footlights to make a speech. Instantly there were shouts from the pit, “Go home, Cooke; go home; you’re drunk.” Cooke kept his ground. “Didn’t I please you in Shylock?” “Yes, yes; you played that nobly.” “Well, then, the man who played Shylock well could not be drunk.” “You weren’t drunk then, but you are drunk now,” was the rejoinder; and they continued to roar, “Go home; go home; go to bed.” Cooke, indignant, tapped the handle of his sword emphatically, “Tis but a foil;” then, extending his right arm to the audience, “Tis well for you it is,” and marched off amid roars of laughter’ (vol. i., p. 161). In aftertimes he used to take off the stately ways of Mrs. Siddons. His first interview with her (after the appearance of the ‘Sketch-Book’) ‘was characteristic. As he approached and was introduced, she looked at him for a moment, and then, in her clear and deep-toned voice, she slowly enunciated, “You’ve made me weep.” Nothing could have been finer than such a compliment from such a source; but the “accost” was so abrupt, and the manner so peculiar, that never was modest man so completely put out of countenance’ (vol. i., p. 89). He felt so enthusiastic about Miss O’Neill, that he paid her the strange compliment of declining to be introduced to her, ‘unwilling to take the risk of a possible disenchantment.’

bounded my view in front seemed to have sunk from before me, and I looked forth on a luxuriant and almost boundless expanse of country. The forest swept down from beneath my feet, and spread out into a vast ocean of foliage, tinted with all the brilliant dyes of autumn, and gilded by a setting sun. Here and there a column of smoke, curling its light blue volumes into the air, rose as a beacon to direct the eye to some infant settlement, as to some haven in this sylvan sea. As my eye ranged over the mellow landscape I could perceive where the country dipped again into its second terrace, the foliage beyond being more and more blended in the purple mist of sunset; until a glittering line of gold, trembling along the horizon, showed the distant waters of Ontario.'—p. 183.

These longings received early in life a full gratification. There was a consumptive tendency in the family, whether derived from the father's or mother's side, which cut short the lives of some, and rendered others subjects of great anxiety. Washington, at twenty-one, was extremely delicate, and it was judged advisable to send him to Europe, in order to try the effects of a long sea voyage and a milder climate than his own. He was at this time already embarked in life as 'clerk' to Mr. Hoffman, 'a distinguished advocate;' but in the young States—such was the happy security of the prospect of business for any one who turned his mind to it, and such the versatility of the community—an interruption of a year or two seems never to have been regarded as a matter of any consequence in a young man's professional or commercial career. His brothers shared the expense between them, the chief burden being borne by William, the eldest, 'the man I most loved on earth,' said Washington in after years. He was in such frail condition when he stepped on the deck of the vessel which was to carry him to Bordeaux, that the captain said to himself, 'There's a chap who will go overboard before we get across.' But every day of his much-loved travel seems to have removed the danger farther. His wanderings, though in the most frequented regions of Europe, were delightfully full of adventure. For an American to make his way through the Imperial dominions at the outbreak of war with England, was a matter of difficulty and some danger. At Nice he was detained five weeks as a suspected spy: once captured by pirates, or privateer's men (the distinction seems shadowy enough); saw Nelson's fleet pass in all its magnificence through the Faro of Messina, and the illuminations for Nelson's death-crowned victory in London. He visited Sicily, Rome,\* Northern Italy,

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\* It was at Rome that the desire to become a painter took strong but temporary possession of his mind. To a genuine American, like himself, it does not seem to have occurred as an objection that he had never tried his hand at art at all.

Italy, Paris, England, and returned to New York in 1806, with his health re-established, and destined to endure, with trifling interruption, the trials of a very long life, but all chance of devotion to a settled every-day life irrevocably gone, and the propensity to a wandering existence radically implanted.

Such a propensity could hardly flourish along with due devotion to the legal profession, to which he now returned in his own country. His letters and journals become filled with the usual *jérémiades* of men of his turn of mind over want of success, betraying at the same time something of internal satisfaction that business keeps aloof, and thereby furnishes an excuse for clinging to literary occupation and its accompanying amusements. For Washington had become a contributor to newspapers, even before he first left his country, and now made them a means of livelihood as well as pleasure. Students for admission to the bar had in New York the excellent habit of giving a supper to their examiners, at which the names of successful candidates were read over. Those who officiated at Irving's call boggled a little, conscientiously, when they came to his name. 'Martin,' said one to the other, 'I think he knows a little law.' 'Make it stronger, Joe,' was the reply—'*dammed* little': with which compliment he passed. As he was not destined by nature to become a Story or a Kent, we may dismiss his connexion with the law in a few words. The only occasion on which he ever seems to have caught a spark of enthusiasm for the sable profession was when he went to Richmond, in 1807, on what his biographer oddly calls an 'informal retainer from some of Colonel Burr's friends,' the said Colonel being then on his trial for high treason. Aaron Burr was one of those half-dreaming and half-knavish political plotters on a great scale, of whom Continental Europe has produced many, England and America but few; for the special vocation of such men does not thrive well in countries where the game of politics is played above-board. He had schemes for the disruption of the juvenile Union, and for establishing a new federation in the valley of the Mississippi. His mysterious and abrupt manners imposed much on his associates: we remember one who knew him on a visit to England describing him as having the habit, when he entered a room, of feeling the panels of the walls mechanically with his cane, to ascertain whether they were adapted for listeners posted behind. Irving made a hero

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all. 'I believe it owed its main force to the lovely evening ramble in which I first conceived it, and to the romantic friendship I had formed with Allston (the American artist). Whenever it recurred to my mind, it was always connected with Italian scenery, palaces, and statues, and fountains, and terraced gardens, and Allston as the companion of my studio.'

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of his romantic client, whom the lawyers, between them, contrived to extricate by plunging the court, not unwilling, in a quagmire of technical embarrassments.

Literary life, and the amusements attending it, were his real passion. We must refer the reader to Mr. Pierre Irving's narrative for a detail of 'life in New York,' such as Irving and the 'choice spirits' of the commonwealth found it fifty years ago: rejoicing

'To riot at Dyde's on imperial Champagne,  
And then scour our city, the peace to maintain,'

in company with Allston the artist, Paulding the writer, Longworth the bookseller, 'commonly called the Dusky,' whom it was their delight to circumvent, and Henry Ogden, of whom the following is the only memorial: he had left one of their meetings 'with a brain half bewildered by the number of bumpers he had been compelled to drink. He told Irving the next day that in going home he had fallen through a grating which had been carelessly left open, into a vault beneath. The solitude, he said, was rather dismal at first, but several other of the guests fell in in the course of the evening, and they had on the whole quite a pleasant night of it.' We cannot but conceive the gaiety of those primitive days as rather of a drab-coloured order, and doubt whether the title of 'Lads of Kilkenny,' which the most daring leaders of New York life then gave themselves, would have been recognised as appropriate by its proper owners: but they were sufficient to leave a very pleasant memory in Irving's mind, and often, in times of depression, to provoke comparison with the enjoyments of London 'society,' to which he was afterwards introduced.

Meanwhile he seems to have eked out the little he derived from his parents, and the assistance of his family, chiefly by literary work. He began writing for the newspapers, as we have seen, even before his first visit to Europe. After his return, he soon attained a leading place among the rising literary men of his country, where, however, there was as yet but little encouragement to afford substantial support to such a reputation. 'Salmagundi,' a miscellany in the essayist style, by himself, his brother Peter, and others, appeared in 1807, and was the first work through which he became known in London, where it was reprinted in 1811. Paulding, the editor, allotted the two brothers a hundred dollars apiece as their ultimate share of profits, while he inhumanly (and as Irving believed falsely) boasted that he had himself realised ten or fifteen thousand by it. 'The whirligig of Time brings about its revenges,' and we shall see presently how Irving turned  
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the tables on publishers in later days, when his celebrity led them into speculations which the public would not ratify. This finished, he and Peter immediately set about the more celebrated Knickerbocker's History of New York; 'for my pocket,' said Peter, 'calls aloud, and will not brook delay.' It was completed and produced, and at once achieved in America a high popularity; but saddened by the occurrence at the same time of the most melancholy event of Irving's life.

He had formed a strong attachment to a young lady named Matilda Hoffman, the daughter of the 'advocate' in whose office he had commenced his clerkship. Irving's means were slender enough—little but the results of his pen, and a share in the kind of co-operative society which the brothers seem to have established. But his powers were great, his character most amiable; and in that happy region and time Cupid was not much in the habit of allowing Hymen to be embarrassed by chilling suggestions about future prospects. Everything went well with their loves, when they were interrupted by the rapid illness and death of the object of his affections. And his was one of the rarer cases in which such a wound never heals:—

'It is an indication,' says his nephew, 'of the depth of the author's feeling on this subject, that he never alluded to this part of his history, or mentioned the name of Matilda even to his most intimate friends; but after his death, in a repository of which he always kept the key, a package was found marked outside, "Private Mems.," from which he would seem to have at once unbosomed himself. This memorial was a fragment of sixteen consecutive pages, of which the beginning and end were missing. . . . It carried internal evidence of having been written to a married lady, with whose family he was on the most intimate terms, and who had wondered at his celibacy, and invited a disclosure of his early history. With these private memorandums were found a miniature of great beauty, enclosed in a case, and in it a braid of fair hair, on which was written in his own hand, Matilda Hoffman.'

It adds something more to the touching interest of this sad little history, that at the time of Matilda's last illness and death, poor Irving was actually engaged, as we have seen, in finishing and preparing for the press his 'History of New York;' the well-known work of humour on which his reputation in America first rose, and of which the genial, though somewhat wiredrawn, tone of mock-heroic fun must have jarred strangely on the feelings of the broken-hearted man:—

'I brought it to a close,' he says, in the memorial in question, 'as well as I could; and published it; but the time and circumstances in which it was produced rendered me always unable to look upon it with

with satisfaction. Still it took with the public, and gave me celebrity, as an original work was something remarkable and uncommon in America. I was noticed, caressed, and for a time elevated by the popularity I had gained. I found myself uncomfortable in my feelings at New York, and travelled about a little. Wherever I went I was overwhelmed with attentions. I was full of youth and animation, far different from the being I am now, and was quite flushed with this early taste of public favour. Still, however, the career of gaiety and notoriety soon palled upon me; I seemed to drift about without aim or object, at the mercy of every breeze; my heart wanted anchorage. I was naturally susceptible, and tried to form other attachments: but my heart would not hold on: it would continually recur to what it had lost: and whenever there was a pause in the hurry of novelty and excitement, I would sink into dismal dejection. For years I could not talk on the subject of this hopeless regret: I could not even mention her name: but her image was continually before me, and I dreamt of her incessantly.'—Vol. i., p. 129.

According to his biographer,—

'He never alluded to this event of his life, nor did any of his relatives ever venture in his presence to introduce the name of Matilda. I have heard of but one instance in which it was ever obtruded upon him; and that was by her father, Mr. Hoffman, nearly thirty years after her death, and at his own house. A grand-daughter had been requested to play for him some favourite piece on the piano; and in extracting her music from the drawer, had accidentally brought forth a piece of embroidery with it. "Washington," said Mr. Hoffman, picking up the faded relic, "this is a piece of poor Matilda's workmanship." The effect was electric. He had been conversing in the sprightliest mood before, and he sank at once into utter silence, and in a few minutes got up and left the house. . . . It is in the light of this event of Mr. Irving's history, that we must interpret portions of his article on "Rural Funerals" in the "Sketch-Book," and also that solemn passage in "St. Mark's Eve," in "Bracebridge Hall," beginning "I have loved as I never again shall love in this world. I have been loved as I never shall be loved." To this sacred recollection also I ascribe this brief record, in a note-book of 1822, kept only for his own eye: "She died in the beauty of her youth, and in my memory she will be young and beautiful for ever."—p. 131.

Thus speaks the editor in his first volume: but there is considerable danger incurred in thus publishing biography by instalments. Before the third volume was through the press, a little correspondence has been brought to light which shows that the hero's heart did not remain so absolutely true to its first impression as had been supposed—that, in point of prosaic fact, he did fall in love some fifteen years later with a fair English girl into whose society he had been thrown in Germany, quite seriously enough to be made very uneasy by Miss Emily Foster's friendly,  
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but decided, rejection of his addresses. Still, this early attachment, if not quite so exclusive as romance would fain have pictured, exercised, no doubt, a lifelong influence on his character.

We have dwelt the rather on this episode in Irving's life—the permanent impression made by the passing away of an unknown and short-lived girl on the character and genius of a man whose fate was to mix largely in society, and acquire literary pre-eminence—because it seems to us to furnish also the real keynote of one of the most beautiful and popular passages in the 'Sketch-Book.' The 'Broken Heart,' suggested by the well known story of Miss Curran and Robert Emmett, tells in part his own tale also. It is true that he attributes the faculty of nourishing those inveterate memories of the heart to women only; but Irving's was in many respects a feminine, not effeminate, disposition, and no doubt he sate to himself for some traits in the picture.

'It is a common practice with those who have outlived the susceptibility of early feeling, or have been brought up in the gay heartlessness of dissipated life, to laugh at all love stories, and to treat the tales of romantic passion as mere fictions of novelists and poets. My observations on human nature have induced me to think otherwise. They have convinced me, that however the surface of the character may be chilled and frozen by the cares of the world, or cultivated into mere smiles by the arts of society, still there are dormant fires lurking in the depths of the coldest bosom, which, when once enkindled, become impetuous, and are sometimes desolating in their effects. Indeed, I am a true believer in the blind deity, and go to the full extent of his doctrines. Shall I confess it? I believe in broken hearts, and the possibility of dying of disappointed love. I do not, however, consider it a malady often fatal to my own sex; but I firmly believe that it withers down many a lovely woman into an early grave.

'Man is the creature of interest and ambition. His nature leads him forth into the struggle and bustle of the world. Love is but the embellishment of his early life, or a song piped in the intervals of the acts. He seeks for fame, for fortune, for space in the world's thought, and dominion over his fellow men. But a woman's whole life is a history of the affections. The heart is her world: it is there her ambition strives for empire; it is there her avarice seeks for hidden treasures. She sends forth her sympathies on adventure; she embarks her whole soul in the traffic of affection; and if shipwrecked, her case is hopeless—for it is a bankruptcy of the heart.

'To a man the disappointment of love may occasion some bitter pangs: it wounds some feelings of tenderness—it blasts some prospects of felicity; but he is an active being—he can dissipate his thoughts in the whirl of varied occupation, or can plunge into the tide of pleasure; or if the scene of disappointment be too full of painful

associations, he can shift his abode at will, and taking as it were the wings of the morning, can "fly to the uttermost parts of the earth and be at rest."

'But woman's is comparatively a fixed, a secluded, and a meditative life. She is more the companion of her own thoughts and feelings; and if they are turned to ministers of sorrow, where shall she look for consolation? Her lot is to be wooed and won; and if unhappy in her love, her heart is like some fortress that has been captured, and sacked, and abandoned, and left desolate.'

We do not know whether the strange and suspicious resemblance between this passage and the well known lines in 'Don Juan,'—

'Man's love is of man's life a thing apart,'

and so forth, has ever been remarked on. It is so great that, on all ordinary calculation of probabilities, plagiarism would be supposed: and Lord Byron was of all converters to their own use of other men's intellectual goods, after Shakespeare, the most daringly unconcerned. Moore, in his edition of 'Don Juan,' quotes as a parallel passage a few sentences in 'Corinne;' but they are not so near by an enormous distance. And yet it does so happen that the clearest possible case of literary alibi seems to be proveable in favour of both writers. Lord Byron wrote the first canto of 'Don Juan' in Italy, in the summer of 1818. It was privately printed early in 1819, and published in September of that year. Irving sent the MS. of No. 2 of the 'Sketch-Book' (in which the 'Broken Heart' occurs) from England, where he wrote it, to America, in April, 1819. It was printed in America that summer, and first appeared, in England, in the 'Literary Gazette' in September that year, the same month with 'Don Juan.' It is all but mathematically impossible that either could have borrowed from the other. And yet many an author has been pilloried (metaphorically) on less cogent internal evidence, as a close comparison of the passages will show.

We have said that Matilda Hoffman's catastrophe decided Irving's destiny. He had, indeed, as we have seen, a natural predilection for the Gipsy or 'Bohemian' mode of existence. But this might have been counteracted by strong domestic instinct and family affection. His whole life bears evidence to the conflict in his disposition between the two opposing tendencies. He never could remain long in any fixed condition. His life was a succession of varying schemes and shifting localities. And yet his works are full of passages evincing a passion for quiet homes and steady Penates. The best remembered and most picturesque portions of the 'Sketch-Book' and its successors describe the habits and enjoyments of a stationary, old-fashioned,  
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rustic population. And it is plain from his letters and journals how intensely he enjoyed the repose and warmth of the family circles in which he became at different times accidentally domesticated, and how highly his own presence in them was appreciated in return. But whenever he seems likely to take root in any spot, the whirlwind seizes on him as on Béranger's Wandering Jew, and drives him devious over the world.

In 1814 we find Washington Irving, notwithstanding his constitutional aversion to politics, inspired by the war with England with patriotic ardour. He served for some time on the staff of the civic army of those days, while his brother William represented New York in Congress. He does not appear, however, to have been engaged in actual fighting. Some years afterwards an endeavour was made to draw him into the public service. His countrymen, however they may be chargeable with making official situations in general the mere prizes of party zeal, have never been wanting in affording this kind of encouragement to literary merit. His friend, the celebrated Commodore Decatur, now obtained for him the promise of the office of 'First Clerk in the Navy Department, which is similar to that of Under-Secretary in England. The salary' (adds his informant) 'is equal to 2400 dollars per annum, which, as the Commodore says, is sufficient to enable you to live in Washington like a prince.' 'To the great chagrin of his brothers, and contrary to their expectations' (says his biographer), 'Washington declined this offer.' The principal reason which he assigned was, 'I do not wish to take any situation that must involve me in such a routine of duties as to prevent my attending to literary pursuits.' He was so disturbed, however, 'by the responsibility he had taken in refusing such a situation, and trusting to the uncertain chances of literary success, that for two months he could scarcely write a line.' Probably the old wound—that inflicted by the death of Matilda Hoffman—was not yet scarred over, and he shrank from the dreariness of steady routine employment in solitude as men so hit often do. In after life he chose to regard this as a mistake. The following letter, addressed in 1824 to his nephew, Pierre Paris Irving, seems like an unburdening of his conscience:—

'I hope your literary vein has been but a transient one, and that you are preparing to establish your fortune and reputation on a better basis than literary success. I hope none of those whose interest and happiness are dear to me will be induced to follow my footsteps, and wander into the seductive but treacherous paths of literature. There is no life more precarious in its profits and fallacious in its enjoyments than that of an author. I speak from an experience which may

be considered a favourable and prosperous one; and I would earnestly dissuade all those with whom my voice has any effect from trusting their fortunes to the pen: for my part, I look forward with impatience to the time when a moderate competency will place me above the necessity of writing for the press. I have long since discovered that it is indeed vanity and vexation of spirit. . . . I feel myself called upon to urge these matters: because, from some passages in your letter, it would seem that some idle writing of mine had caught your fancy, and awakened a desire to follow my footsteps. If you think my path has been a flowery one, you are greatly mistaken: it has too often lain among thorns and brambles, and been darkened by care and despondency. Many and many a time have I regretted that at my early outset in life I had not been imperiously bound down to some regular and useful mode of life, and been thoroughly inured to habits of business; and I have a thousand times regretted with bitterness that I was ever led away by my imagination. Believe me, the man who earns his bread by the sweat of his brow, eats often a sweeter morsel, however coarse, than he who procures it by the labour of his brains. . . . I am anxious to hear of your making a valuable practical man of business, whatever profession and mode of life you adopt. . . . Our country is a glorious one for merit to make its way in; and wherever talents are properly matured, and are supported by honourable principle and amiable manners, they are sure to succeed. As for the talk about modest merit being neglected, it is too often a cant, by which indolent and irresolute men seek to lay their want of success at the door of the public. Modest merit is too apt to be inactive, or negligent, or uninstructed merit. Well matured and well disciplined talent is always sure of a market, provided it exerts itself; but it must not cower at home and expect to be sought for. There is a good deal of cant, too, in the whining about the success of forward and impudent men, while men of retiring worth are passed over with neglect. But it happens often that those forward men have that valuable quality of promptness and activity, without which worth is a mere inoperative property. A barking dog is often more useful than a sleeping lion.'—*Vol. ii., p. 393.*

This is all very sound doctrine, and well preached, but if it had been acted on, the world would have lost an accomplished and agreeable author, and the author himself a life which seems on the whole to have been an enjoyable as well as a successful one; while the duties of 'First Clerk in the Navy Board' were probably much better performed by some one else.

We are, however, anticipating, in carrying the reader forward to the circumstances of this offer. It was in 1815, immediately on the conclusion of peace between America and Great Britain, that Irving revisited the old world. No very special motive for this journey appears in his biography, beyond the ordinary desire for a temporary change of scene. But that change proved a protracted

tracted one. He 'little dreamt that the ocean he was about to cross would roll its waters for seventeen years between him and his home,' or that the close of those seventeen years would find him an adopted Englishman, familiar to the homes and hearts of his new countrymen as one of the most popular authors of his time.

At this period two of Washington's brothers, Ebenezer and Peter, were established in business at Birmingham, where his brother-in-law, Mr. Van Wart, was also a merchant. He made his home with them on his arrival, and was in course of time persuaded into joining them as a partner. As this constitutes a mere episode in Washington's life, it is sufficient here to say that the partnership was a constant source of anxiety; the house of the brothers Irving got into difficulties, owing to the commercial reaction which followed the peace of 1815, and became ultimately bankrupt in 1818. The matter was of little consequence to Washington—who had no capital to embark in the concern—except that it stimulated him to action, from the necessity of relying on his pen as a regular means of support. And the house of Van Wart, compromised for a time in the failure, soon recovered its position.

Washington's intimacies, on his arrival in England, were chiefly among Americans, and especially the artists, his old friend Allston, Leslie, and Newton. With Leslie in particular he lived on terms of brotherly affection; and there are abundant notices of their companionship in Mr. Tom Taylor's biography of the simple-minded painter. We extract one, though a little in anticipation of another portion of his career:—

'Towards the close of the summer of 1821,' says Leslie, 'I made a delightful excursion with Washington Irving to Birmingham, and thence into Derbyshire. We mounted the top of one of the Oxford coaches at three o'clock in the afternoon, intending only to go as far as Henley that night; but the evening was so fine, and the fields, filled with labourers gathering in the corn by the light of a full moon, presented so animated an appearance, that although we had not dined we determined to proceed to Oxford, which we reached about eleven o'clock, and then sat down to a hot supper. The next day it rained unceasingly, and we were confined to the inn, like the nervous traveller whom Irving has described as spending a day in endeavouring to penetrate the mystery of the "Stout Gentleman." This wet Sunday at Oxford did in fact suggest to him that capital story, if story it can be called. The next morning, as we mounted the coach, I said something about a *stout gentleman* who had come from London with us the day before: and Irving remarked that "the Stout Gentleman" would not be a bad title for a tale. As soon as the coach stopped he began writing with his pencil, and went on at every  
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like opportunity. We visited Stratford-on-Avon, strolled about Charlecote Park and other places in the neighbourhood, and while I was sketching, Irving, mounted on a stile or seated on a stone, was busily engaged with "the Stout Gentleman." He wrote with the greatest rapidity, often laughing to himself, and from time to time reading the manuscript to me. We loitered some days in this classic neighbourhood, visiting Warwick and Kenilworth, and by the time we arrived at Birmingham the outline of the "Stout Gentleman" was completed. The amusing account of "The Modern Knights Errant" he added at Birmingham, and the inimitable picture of the inn yard on a rainy day was taken from an inn where we were afterwards quartered at Derby.\*

'Nothing could be more agreeable,' pursues Leslie, 'than my daily intercourse at this period with Irving and Newton (1820). We visited in the same families, chiefly Americans resident in London, and generally dined together at the York Chop-House, in Wardour Street. Irving's brother Peter, an amiable man, and not without a touch of Washington's humour, was always of our party. Delightful were our excursions to Richmond or Greenwich, or to some suburban fair, on the top of a coach. The harmony that subsisted among us was uninterrupted; but Irving grew into fame as an author, and being, all at once, made a great lion of by fashionable people, he was much withdrawn from us.'

His new occupation, however, as a professional author rendered it necessary that he should seek for advice and encouragement among more influential allies, already known to the literary public; and the first of these who befriended the young foreigner was Campbell. Peter Irving had done the poet some service in the way of obtaining for him an American copyright. Campbell, in return, introduced Washington both to the authors whom he loved, and the booksellers, whom he hated but dreaded. Campbell, it is said, once, at a dinner in the height of the war, gave 'Napoleon' as a toast. Being asked the reason of so disloyal a proceeding, he replied, 'because he once shot a bookseller.' It was through Campbell, and as early as 1817, that Irving obtained his first introduction to Walter Scott, the origin of an acquaintance which proved to the American a source not only of pleasure, but of considerable advantage. Scott took to him at once. He not only felt for the Transatlantic stranger that kindly sympathy which he was always wont to extend to literary adventurers of merit, but he esteemed his character, enjoyed his easy flow of conversation, and his unobtrusive company. He calls him (in a letter published in Lockhart's Life) 'one of the best and pleasantest acquaintances I have made this many a

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\* 'Autobiographical Sketches,' vol. ii., p. 65.

day.' Irving, for his part, repaid Scott's kindness by the most enthusiastic admiration:—

'I cannot express my delight at Scott's character and manners,' he says in his first letter to his brother Peter Irving from Abbotsford; 'he is a sterling, golden-hearted old worthy, full of the joyousness of youth, with an imagination continually furnishing forth pictures, and a charming simplicity of manners that puts you at ease with him in a moment. It has been a constant source of pleasure to me to remark his deportment towards his family, his neighbours, his domestics, his very dogs and cats; everything that comes within his influence seems to catch a beam of that sunshine that plays round his heart; but I shall say more of him hereafter, for he is a theme on which I shall love to dwell.'

'I am now pretty well acquainted with the luminaries of Edinburgh,' he says elsewhere, 'and confess that, among them all, Scott is the man of my choice. Neither the voice of fame nor the homage of the great has altered in the least the native simplicity of his heart. . . Jeffrey excels him in brilliancy of conversation, but Jeffrey seems to be always acting a studied part; and although his social feelings may be no less warm than Scott's, yet they are more or less disguised under a species of affectation. His friends esteem him a miracle of perfection; and, in point of talent, none will be found to contradict them; but as for the *et ceteras*, I would not give the Minstrel for a wilderness of Jeffreys.'—p. 221.

Perhaps, however, gratitude may have had some share in producing these enthusiastic feelings. The 'Sketch Book' appeared first in America, in numbers, in 1819, under the superintendence of his brother Ebenezer, and his friend Brevoort. It seized at once on the American mind—a rare event for a work of imagination, and what may be termed peculiarly English humour, in that uncongenial atmosphere; but 'Rip van Winkle' and 'Sleepy Hollow' seem to have carried everything before them. In the course of the year the London Literary Gazette commenced a reprint of the series. Irving appears really not to have contemplated publication in England, 'conscious that much of the contents could be interesting only to American readers, and having a distrust of their being able to stand the severity of British criticism;' but this proceeding of the Gazette drove him into the field. He first applied to Murray, who declined the undertaking without having read the book. It then occurred to him to send the numbers to Walter Scott, on the strength of their as yet slight acquaintance, and ask him to negotiate with Constable, at Edinburgh. Scott entered at once on the business with all the heartiness inspired by good-will to the author and a real sense of the value of the book. 'It is positively beautiful,' he said; and evinced his appreciation of it in his own characteristic way, by offering Irving 'the

'the superintendence of an anti-Jacobin periodical publication which will appear weekly in Edinburgh, with 500*l.* a year certain, and the reasonable prospect of future advantages.' Irving declined the offer, not only on account of his general dislike to politics, but his special dislike of 'any recurring task, any stipulated labour of body or mind,' anything, in short, which would interfere with the unattached and discursive character of his existence. Irving then determined to publish on his own account, through Miller. 'It is certainly not the very best way,' observes Scott thereupon (March 1, 1820), 'to publish on one's own account; for the booksellers set their faces against the circulation of such works as do not pay an amazing toll to themselves. But they have lost the art of altogether damming up the road in such cases between the author and the public, which they were once able to do as effectually as Diabolus, in John Bunyan's Holy War, closed up the windows of my Lord Understanding's mansion.' Proceedings were interrupted by the failure of Miller. Ultimately, Scott induced Murray to complete them; and the great publisher bought the copyright of a second edition for 200*l.* The success of the book was complete; and from that time Irving's modest literary fortune may be said to have been made.

The Sketch-Book remains the standard work by which Irving's title to a position among English writers was fixed. Nor did he ever rise above the height which he then attained. For our own parts we are inclined to think that 'Bracebridge Hall' and the 'Tales of a Traveller' contain some passages which excel in merit anything achieved in his earlier publication. But whether this be so or not, the 'Sketch-Book' gave vent to the 'first sprightly runnings' of his genius. Writings of this class must be of great excellence to retain their hold on the public for more than a few years. Newer and more fashionable candidates for popularity of the same order are daily arising to supplant them. Dickens and Thackeray, not to mention others of less name, have no doubt left but scanty room on our library shelves for Irving. His real defect is want of originality; or, to speak perhaps with more accuracy, such originality as he possesses is of manner, not of matter. He was not much of an observer at first hand either of nature or mankind. His talent lay rather in reproducing the impressions which he had derived from books, than in creating from his own stores of perception or imagination. His England, with its pastoral, old-fashioned inhabitants, is the England of which an American reads or dreams, not our country of the nineteenth century. It has been not ill said of him, that he 'brought us *refracimientos* of our own thoughts, and copies of our favourite authors. We saw our self-admiration reflected in an accomplished



accomplished stranger's eye.' There is a sameness, too, in the general run of his graceful little creations, which is not ill-characterised by the epithet which was applied to him of the 'Wouvermans of Anglo-American literature.' Still, his touch is often vigorous, sometimes picturesque, always pleasing; he possesses in great perfection that art of mingling pathos with humour, carrying neither beyond the point at which it will harmonise with the other, which is among the rarer gifts of authorship. In fact, we hardly know of any one since Addison, his model, who exhibits it in an equal degree. And these qualities have secured him a permanent place, if not one of the highest order, in the ranks of modern humorists. Notwithstanding all the vogue of later writers, Irving remains one of the most popular of our deceased authors, judging by the common-place but fair test of library circulation. And it is worthy of remark, that he occupies, and perhaps alone, a middle place between the literature of distinct generations or centuries. He is connected on the one hand with a series of bygone celebrities whose fashion is out of date: on the other, with some of those whose fashion is of the newest. As to a great portion of his writings, he is the successor of the early 'British Essayists,' particularly of Steele and Goldsmith, whose style and peculiarities he endeavoured to adapt to his own generation. As to another portion, and perhaps that most peculiar to himself—the grotesque, or Hoffmanesque, or comic legendary style, exemplified in 'Rip Van Winkle,' the 'Legend of Sleepy Hollow,' and several more of his best-known productions—he is rather the predecessor of a newer school. He, De Quincey, and one or two more, may be said to be the original explorers, in English at least, of this particular vein, which has been subsequently followed up, even to our weariness, by so many more; which was peculiarly seductive to Dickens in his earlier days, until his fame became established on a firmer basis; and which seems still to furnish a large share of the material of some of our most popular periodicals. And we cannot close this short critical essay without adverting to one peculiarity in Irving's writings to which justice has scarcely been done—the exceedingly musical cadence of his prose. This is scarcely owing to labour; for he was a rapid and rather careless writer. It was, we imagine, the result of a natural gift. Its existence can easily be tested by reading aloud.

Having got the 'Sketch-Book' and the fraternal bankruptcy fairly off his mind for the time, Irving proceeded to gratify his restless disposition by leaving England and setting up his bachelor tent in Paris, in company with faithful brother Peter. They started, after the fashion of their country, with a speculation

tion for running steamers on the Seine, between Havre and Rouen, which scheme was before its age, and had little result beyond absorbing the profits of the 'Sketch-Book.' It would have been well if the national itch for 'investments' had been cured in him by this uncomfortable experience: but within a few years we find the two brothers again engaged in the 'Bolivar Copper Mine,' and again running up a sad per contra in Washington's little account-book. He made the gay city his abode on this occasion for nearly a year and a half; from August, 1820, to the end of 1821.

The most noteworthy circumstance connected with his stay there was the intimacy which he formed with Moore the poet, whose residence in Paris was just then compulsory, owing to his Bermudian entanglements. Their slight acquaintance with each other soon ripened into familiar friendship. It is evident that Irving in reality liked Moore by far the best of the English literary men with whom he made friends, and Moore, on his part, cordially returned the compliment. There was something congenial in the social, impecunious, Bohemian habits of both, while, in conversation, Moore's brilliancy fitted in admirably well with Irving's more natural and simple style, which served the poet as a foil. Moore was seldom happier than in the intervals of his gay invitations (which were, nevertheless, so much to his taste), when he could get Irving alone, or with one or two more, to drop in for a 'roast chicken with Bessy,' probably finishing the evening at some Parisian theatre. Irving had what was to Moore the merit of contrast. He was at bottom a man of melancholy temperament, rather dependent on others for excitement, and somewhat slow to draw out. The poet in his Journals describes a scene at his own lodgings, when the floor gave way through some accident. 'Irving's humour,' he adds, 'broke out as the floor broke in, and he was much more himself than ever I have seen him.' More generally, Moore esteemed him 'not strong as a lion, but delightful as a domestic animal.' They were also of considerable service to each other as literary brothers. Irving doubtless supplied Moore with many a hint which expanded into verse: Moore, according to his own account, made a present to Irving of some of the best stories recounted in his work.\*

Irving

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\* The genealogy of good stories leads us back to periods of antiquity almost as bewildering as that of Man in the hands of modern philosophers. Every one knows the tale of the student in Paris and the ghostly lady, whose head fell off as soon as her collar was untied. Alexander Dumas has only recently reproduced it as 'La Femme au Collier de Velours,' without the slightest hint of appropriation from Irving's Lady with the Black Collar ('Tales of a Traveller'). Moore says that he told the story to Irving, 'having had it from Horace Smith' (Journals,

Irving returned to London to find himself famous, and, in a certain degree, fashionable; as we have seen that his American friends greatly complained. We rather doubt, however, the extent of that initiation into good society, technically so called, for which Leslie in the simplicity of his heart gave him credit. To say the truth, Irving, though among his own associates the most natural and unassuming of men, was not more proof than others of the same easy nature against the little bits of condescending flattery from fashionable folks with which he occasionally met. We English ought certainly to be the last people to satirize others for tuft-hunting: but it is amusing to perceive how very naturally our Republican cousins take the inoculation of that truly British disease. Lady Lyttelton had been pleased with the 'Sketch-Book,' and wrote to Mr. Rush, the American Minister in London, to ask whether there was any truth in the report that this work was really written by Walter Scott; or rather to apply to his Excellency for a triumphant proof of its falsehood, as it put her out of all patience to hear the surmise. The consequence was an introduction by Mr. Rush to the real author, who adroitly informed Lady Lyttelton that the article on 'Rural Life,' which had particularly taken her fancy, was 'sketched in the vicinity of Hagley, just after he had been rambling about its grounds, and whilst its beautiful scenery, with that of the neighbourhood, were fresh in his recollection;' and finally an invitation to Irving (1820) to pay her father, Lord Spencer, a visit at Althorp. This circumstance seems to have elevated the worthy author exceedingly, and is chronicled by his biographer with such solemnity as seems to indicate that he shares in a due susceptibility for such aristocratic honours. Irving, being at Paris, was forced to decline the invitation, and in doing so, through the American Minister Rush, says, 'I hardly know how to express myself as to 'the very flattering communication from Mr. Lyttelton. It is enough to excite the vanity of a soberer man than myself. . . . Will you be kind enough to convey,' &c., &c., 'but, above all, my heartfelt sense of the

(Journals, iv. 208). But it will be found with very slight variation in old Sandys' commentary on Ovid's 'Metamorphoses,' published in 1640 (Book xi.). 'By a French gentleman I was told a strange accident which befel a brother of his, who saw on Saint German's Bridge, by the Louvre [this was the official name, afterwards superseded by the popular appellation of the Pont-Neuf], a gentlewoman of no meane beauty, sitting on the stones (there laid to finish that worke) and leaning with her elbow with a pensive aspect. According to the French freedome he began to court her, whom she intreated for that time to forbear, yet told him "if he would bestow a visit to her lodging about eleven of the clock he should finde entertainment agreeable to his quality." He "found her touch too colde for her youth." The morning "discovered unto him a coarse by his side, forsaken by the soule the evening before."'

interest

interest evinced in my behalf by Lady Lyttelton, which, I frankly declare, is one of the most gratifying circumstances that have befallen me in the whole course of my literary errantry.' His little knot of American associates were as charmed as himself. 'We had heard a rumour of Earl Spencer's invitation to you,' says Leslie, 'and were very glad to hear it confirmed. Miller says Geoffry Crayon is the most fashionable fellow of the day!' It is almost a pity to quote, even in passing, these follies of the wise; and it is justice to add that, if Irving gave way on this occasion to the spell, such weakness was inconsistent with the general frankness of his disposition and independence of his character.

The 'Sketch-Book' was followed in course of time by what may be termed its continuation, 'Bracebridge Hall' (1822), and the 'Tales of a Traveller' (1824), of which we have already spoken. For the former, Irving got 1000 guineas from Murray; for the latter, he asked 1500 and was offered 1200, but how the difference was settled does not appear. These sums, however, by no means represent his literary income for the year in question, which was swelled by many subsidiary operations in England, and contributions apparently from America. In fact, he was now enjoying affluence in an author's sense of the word, and laying by money for a rainy day. He was offered a hundred guineas an article, to write for the 'Quarterly;' but, to his honour, even though we may deem the scruple unnecessary, he refused to be connected with a publication which he regarded as hostile to his country. He wandered about from Paris to London, and from one spot to another in England, without fixed place of residence. Perhaps the happiest little episode in his life, judging from the memoirs preserved of it, was his sojourn at Dresden for six months of 1822-3; chiefly animated by his intimacy with a charming English family, that of Mrs. Foster, daughter of Lord Southampton, in which he became thoroughly domesticated. The beginning of this acquaintance was perhaps unique in its singularity.

'It appears' (says one of the ladies of the family) 'that some time previously my mother had written to her eldest daughter in England a full and affectionate letter; in it, as was her custom, she enlarged on the works she was then reading. These works happened to be Mr. Irving's. With all the warmth and enthusiasm of her nature she had commented on and commended them, and finished her letter by transcribing a favourite passage from the Sketch-Book, at the bottom of which she wrote the author's name in full, "Washington Irving," not leaving room for her own signature. This letter miscarried, and the police opened it. They found no name but Washington Irving's, and

and not pushing their inquiries further, or not understanding English,—if they did, they took this name as clear testimony that he was the writer of the letter,—and knowing his whereabouts, returned it to him, as they supposed, in the usual course of business. . . . He told us afterwards that no praise had ever seemed to him so sweet, so genuine, as what he so unexpectedly found in those lines.'—Vol. iii., p. 337.

It was impossible not to seek the acquaintance of the lady who had thus unconsciously opened her heart to him. And it was to a daughter of Mrs. Foster that he formed that attachment to which we alluded in a former part of this article—a short-lived dream of romance, born amidst the gaieties of the little German court: nourished by poetry, and mutual flattery, and the moon, and long summer rambles amidst the hills and forests and haunted castles of old Saxony: and extinguished by 'conviction of its utter hopelessness' from want of requital. But the same lady (now Mrs. Fuller, the wife of a clergyman in Northamptonshire), on being applied to by Mr. Pierre Irving for his uncle's correspondence with the family, sent him the following graceful testimonial to the memory of her former admirer.

'The passages I have sent give an idea of his life in Dresden. Sought after by all in the best society, and mingling much in the gay life of a foreign city, and a Court where the Royal family were themselves sufficiently intellectual to appreciate genius, but really intimate with ourselves only, and to such a degree that it gives me a right to judge of some points in his character. He was thoroughly a gentleman, not merely externally in manners and look, but to the innermost fibre and core of his heart. Sweet-tempered, gentle, fastidious, sensitive, and gifted with the warmest affection; the most delightful and invariably interesting companion, gay and full of humour, even in spite of occasional fits of melancholy, which he was, however, seldom subject to when with those he liked; a gift of conversation that flowed like a full river in sunshine, bright, easy, and abundant.'—Vol. ii., p. 340.

This was, however, in his happier moments. About this time, at the age of forty, that satiety of a life without definite objects, and vague fear of a more objectless future, which is the Nemesis of a Bohemian existence, seems to have fallen on him with painful acuteness. The symptoms were complicated in his case with those of temporary loss of health. He had the nightmare feeling of overtaking his powers, and struggling against diminishing popularity and decaying friendships for a hardly won existence.

'I have, in fact, at times' (he writes in 1823) 'a kind of horror on me, particularly when I wake in the mornings, that incapacitates me for almost anything. It is now passing away, and in a day or two I hope

I hope I shall be quite over it. It has prevented me from pursuing anything like literary occupation. I am aware that this is all an affair of the nerves, a kind of reaction in consequence of coming to a state of repose after so long moving about, and produced also by the anxious feeling on resuming literary pursuits. I feel like a sailor who has once more to put to sea, and is reluctant to quit the quiet security of the shore. If I can only keep the public in good humour with me until I have thrown off two or three things more, I shall be able to secure a comfortable little independence, and then bread and cheese is secure, and perhaps a seat in the pit into the bargain.'—p. 362.

From the recurrence of these 'ægri somnia,' Irving was effectually relieved, after a hypochondriacal year or two, by the opening of a new career of interest. It is not very clear, from Mr. Pierre Irving's narrative, at what period of the author's life he first began to turn his attention to Spanish subjects and Spanish adventure. They have always had a peculiar and somewhat romantic attraction for American literary men, who trace back the first discovery and conquest of their continent to the subjects of Ferdinand and Isabella. We find Irving in 1825 busy acquiring the Spanish language at Paris: in the following year he starts for Bordeaux with brother Peter, evidently intent on Spanish adventure, and on making a book or two thereof: and the design finally culminates in the 'Life of Columbus,' in four volumes, undertaken at the end of 1826, and prosecuted with his usual rapidity of execution; which, considering the correctness of his style, was excessive: Moore says that he wrote about 130 pages of the size of those of the 'Sketch-Book' in ten days, which the poet terms 'amazing rapidity.' For two years he made Spain his home: wandered over the greater part of its provinces; fixed his bachelor abode for one winter in the old pile of the Alhambra, from which sojourn he derived some of his most picturesque and agreeable recollections; and ultimately abandoned his intention of returning to his native country, and came back to London at the end of 1828, on receiving the appointment of Secretary of Legation to the United States in England.

Besides the 'Life of Columbus,' the fruits of his activity during these years were the 'Conquest of Granada,' the 'Tales of the Alhambra,' and so forth. Notwithstanding Irving's charm of style, and occasional excellence as a narrator, it can hardly be said that this series of works have added to his fame, or achieved a permanent popularity. Their subjects, which were then fresh, have now become hackneyed—the Spain of Irving, Lockhart, and (greatest of all) of Ford, has become somewhat wearisome to us in the pages of countless imitation; and

and Irving's works are scarcely executed with sufficient research and depth to be of real historical value, independent of their amusing qualities. They savour too much of the bookmaker. He has been to a great extent superseded by countrymen of his own who have followed in the same track; by the more solid merits of Prescott, who has had in his turn to yield the palm to the energy of Motley. But while falling off in substantial interest, these works were acquiring more and more of circulation and repaying their author more and more in the way of sterling retribution. It is a well-known phenomenon in the natural history of two remarkable species of men, that while the author is growing in bulk and vigour and approaching to his highest flavour, the bookseller makes prey of him: when the author is out of condition and in a declining state, he in turn feeds on the bookseller. Compare the modest earnings of Irving in his palmiest period, with the sums which he continued to extract from the publishing fraternity—until the mistake was found out—for the heavier productions of his age of exhaustion. They excited the envy of Moore to an almost unfriendly point.

'Left' (he says) 'some of the printed sheets' (of *Memoirs of Lord Byron*) 'with Irving, to be sent off to America, he having undertaken to make a bargain for me with the publishers there. If I but make a tenth of what he has done lately for himself in that quarter, I shall be satisfied. 3000*l.* he received from Murray for his *Columbus*, and 2000*l.* for his *Chronicles of Granada*; and on the same two works he has already got 3000*l.* from the American market, with the property of the copyright there still his own. It is true that for Murray (according to his own account) they have not been so fortunate, his *loss* on the two publications being (as he says) near 3000*l.*; which may not be far from the truth, as the *Chronicles* have not sold at all.' \*

Irving soon appears to have found his new office peculiarly incompatible with his impatience of restraint; and, in 1832, at the age of forty-nine (the culminating epoch of man's intellect, according to Aristotle), on Van Buren's arrival here as minister, he resigned, and returned to enjoy in his native country the fame which he had earned in the old world.

It was a period of trial for American institutions. South Carolina had just passed her 'nullification ordinance'; President Andrew Jackson was preparing to enforce by arms, if need were, the maintenance of the Federal system; and Irving himself soon found occasion to say, 'I confess I see so many elements of sectional prejudice, hostility, and selfishness stirring and increasing in activity and acrimony in this country, that I begin

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\* Journal, vi. 91.

to doubt strongly of the long existence of the general union.' He seems to have had just then the very rare visitation of a fit of interest in political matters. 'The grave debates in the Senate,' he says, shortly afterwards, 'occupied my mind as intensely for three weeks as ever did a dramatic representation.' But this fit was too alien from his natural disposition to last. He refused to stand for New York City on the 'Jackson ticket,' or even to give a vote. 'The more I see of political life here,' he says, 'the more I am disgusted with it. There is such coarseness and vulgarity and dirty tricks mingled with the rough-and-tumble contest. I want no part or parcel in such warfares.' He gave himself up with increased zest to his only favourite occupations—the perpetration of long rambling journeys, and the composition of books there anent. Already in the first months of his return he had performed a tour, gigantic by comparison with his European wanderings, over the western parts of the Union, including many hundred miles of ride through the regions beyond the Mississippi; adventures subsequently turned to account in his 'Tour on the Prairies,' 'Astoria,' and the 'Adventures of Captain Bonneville.'

In 1835, Washington Irving established himself at a cottage on the Hudson, close to the legendary 'Sleepy Hollow' and among the favourite scenes of his youth. This dwelling—an old mansion of the Van Tassel family, at first called 'Wolfert's Roost,' afterwards christened by the fancy name of 'Sunnyside,' was well known in after years as the resort of almost every distinguished visitor from Europe to America. 'Here,' says one of his biographers, 'he passed his summers, and his winters he spent in New York, in the streets of which Knickerbocker omnibuses rattled by Knickerbocker Halls, where Knickerbocker clubs held festivals, and at whose wharves magnificent ships and steamers, coming and going every day, also bore that immortal name.' His bachelor home was enlivened by the presence and attentions of nephews and nieces in abundance, and here he continued his literary labours, but scarcely with the success of former years, and, unfortunately, under the pressure of similar pecuniary wants with those which had urged him on in the more elastic period of youth. For the genius of speculation was always besetting him, and his gains, whenever he made any, were pretty sure to be 'locked up in unproductive land purchases,' or some equally unprofitable investment. 'I cannot afford any more to travel,' he writes in 1838; and about the same period the old despondency regarding literary success, thinking 'the vein had entirely deserted him,' was apt to beset his solitary hours. In one respect, however, he was fortunate. Very few literary



literary men, as sensitive as himself, have had so little to endure from hostile criticism, or from personal or party spite. His own inoffensive and genial nature, as well as his established reputation, seem to have secured him this unusual exemption in his own country as well as in England. We hardly trace in the pages of his American life any record of this kind of annoyance, except some very insignificant attacks on the ground of too great fondness for England, and one furious onslaught from a jealous North Carolinian for 'having observed, incidentally, that the Virginians retain peculiarities characteristic of the times of Queen Elizabeth and Sir Walter Raleigh,'—historical associations of which he deemed that his own State had the monopoly.

In 1842, Daniel Webster, under the presidency of Tyler, obtained for Washington Irving a nomination as American Minister to Spain: an unexpected but not ungrateful honour, as, like other men, he seems to have found the fascinations of that country, when once he had become familiar with it, irresistible. He remained there three years, during which he witnessed many a strange revolution in the politics of the Peninsula, including the downfall of Espartero and the triumph of Maria Christina over the Constitutional party, the rise and the fall of Narvaez; of all which very graphic accounts are given in his correspondence contained in these volumes. The 'consumption of ministers in this country,' he says, 'is appalling. To carry on a negotiation with such transient functionaries is like bargaining at the windows of a railway car: before you can get a reply to a proposition, the other party is out of sight.' But it was scarcely a happy period of his life. He missed alike the domestic enjoyments of Sunnyside, and the sparkling society and agreeable flatteries of London and Paris. Spanish politics suited him no better than American:—

'I am wearied,' he writes, 'and at times heart-sick of the wretched politics of this country, where there is so much intrigue, falsehood, profligacy, and crime, and so little of high honour and pure patriotism in political affairs. The last ten or twelve years of my life have shown me so much of the dark side of human nature, that I begin to have painful doubts of my fellow-men, and look back with regret to the confiding period of my literary career, when, poor as a rat, but rich in dreams, I beheld the world through the medium of my imagination, and was apt to believe men as good as I wished them to be.'

But these melancholy fits were counteracted by a full appreciation of what no man estimated better than himself—the rich substitute which Memory affords in advanced life for decayed Imagination:—

'I am now,' he says, at sixty-two, 'at that time of life when the mind has a stock of recollections on which to employ itself; and

though these may sometimes be of a melancholy nature, yet it is a "sweet-souled melancholy," mellowed and softened by the operation of time, and has no bitterness in it. My life has been a chequered one, crowded with incidents and personages, and full of shifting scenes and sudden transitions. All these I can summon up and cause to pass before me, and in this way can pass hours together in a kind of reverie. When I was young my imagination was always in the advance, picturing out the future, and building castles in the air: now memory comes in the place of imagination, and I look back over the region I have travelled. Thank God! the same plastic feeling which used to deck all the future with the hues of fairy-land, throws a soft colouring on the past, until the very roughest places, through which I struggled with many a heart-ache, lose all their asperity in the distance. . . . Here my sixty-second birthday finds me in fine health, in the full enjoyment of all my faculties, with my sensibilities still fresh, and in such buxom activity that, on my return yesterday from the Prado, I caught myself bounding up stairs three steps at a time, to the astonishment of the porter, and checked myself, recollecting that it was not the pace befitting a minister and a man of my years. If I could only retain such health and good spirits, I should be content to live on to the age of Methuselah.'—Vol. iii., p. 307-8.

In consequence (we fancy) of the accession of President Polk and the Democratic party to power, he gave up his appointment in 1846, and Romulus M. Sanders, of North Carolina, reigned in his stead. In August that year he paid his last fleeting visit to England, and in September 'bade adieu for ever to European scenes.'

With his return to his native country from Spain the present volumes end. The adventurous portion of his life had ceased. His later years were chiefly spent in executing the task of collecting and republishing his various works, and in the production of his 'Life of Washington,' which has no doubt its merits, but is not one of those compositions by which he will be ultimately remembered. He enjoyed to a very advanced age his quiet domestic happiness at Sunnyside, dying in 1859. His countrymen honoured him in life, and are justly proud of the more cosmopolitan honours which he achieved in the general world of literature. We do not quarrel with Mr. Rufus William Griswold, author of 'The Prose Writers of America,' when he reminds us that 'Irving's subjects are as three American and two Spanish to one English; the periods of his residence in America, Spain, and England, in the years of his literary activity, bear to each other about the same proportion; and the productions which have won for him the most reputation, even in Europe, are not only such as had no models in the literature of the Old World, but such as could only have been written by one intimately acquainted with

with the peculiar life and manners by which they were suggested; nor even for informing us that 'his style has the ease and purity and more than the grace and polish of Franklin; without the intensity of Brown, the compactness of Calhoun, or the strength and splendour of Webster.' But, leaving these special causes of admiration to his countrymen, and withdrawing, for our part, any claim to appropriate him on the ground of his intense fondness for the domestic life, the society, the traditions, the classical writers of our little England, we will assert for him rather a modest place in that great Parthenon of literary renown which will one day arise when the political distinctions which now divide the great British race are forgotten, or become of secondary import, in comparison with that pervading unity of language, usages, and associations which fuses it all in one.

ART. VI.—1. *Incidents in my Life*. By D. D. Home. London, 1863.

2. *The History of the Supernatural*. By William Howitt. 2 vols. London, 1863.

SPIRIT-RAPPING is unquestionably one of the great facts of our time; we mean as regards the rapping, not necessarily as regards the spirits. That Mr. Home and his fellow-rappers can 'call spirits from the vasty deep,' we no more doubt than that Owen Glendower possessed a similar faculty; but whether the said spirits come when they are called, we are inclined, with Hotspur, to put in the form of a query. Not that we profess absolute unbelief; our state of mind rather approaches to that 'honest doubt' which theologians of advanced views are never weary of telling us, after Tennyson, contains more faith than half the creeds. If this pretty saying of the laureate be anything more than an epigrammatic paradox, we may boast of having a very respectable share of that faith which rappers tell us is indispensable to all who would presume to criticise their performances. In virtue of this faith, which is at the same time doubt, a 'becoming,' as a Hegelian would say, compounded of 'being' and 'not-being,' we profess for the present a sceptical suspension of all judgment, thereby correcting the teaching of one Hume by that of another; for the family name of Daniel the medium is identical with that of David the sceptic, and was originally, as the said David informs us, spelt in the same way, as it is still pronounced. The Southern reader will

have to bear in mind this caution, framed after the example of the Prologue to the 'Rovers:'

'Though the nice ear the erring sight belie,  
For a twice dotted is pronounced like i.'

Our scepticism seems the natural result of the extraordinary and conflicting features which Mr. Home's autobiography exhibits. By all the rules of *a priori* reasoning, by every internal test that has hitherto been proposed to distinguish true miracles from false, the book, by its own witness of itself, would be pronounced utterly incredible. If exceeding silliness in many of the stories narrated; if the absence of all apparent purpose, beyond the gratification of a morbid curiosity; if modes of exhibition similar to those usually adopted by charlatans; if manifestations not merely marvellous to the intellect, but revolting to the moral feelings—if features such as these form a reasonable *a priori* presumption against a narrative of apparently supernatural occurrences, such presumptions undoubtedly exist and press with no light weight against the narrative before us. But, on the other hand, we are bound, in justice to Mr. Home, to admit that this internal evidence against his statements has to be weighed against a very respectable amount of external evidence in their favour; that his own character, so far as we have been able to ascertain, offers no ground for suspecting his integrity; and that the authorities whom he brings forward, both as vouchers for his own trustworthiness and as eye-witnesses of the marvels which he exhibits, are such as would probably be sufficient to ensure belief in any story less intrinsically incredible.

It will, perhaps, be said, that we are not competent to determine on *a priori* grounds what the character of such supernatural manifestations ought to be, and that therefore the internal improbabilities of the narrative form no valid reason for rejecting it. We grant that such improbabilities are not the only evidence admissible in the case; that they furnish, not certainties, but only presumptions, and but one class of presumptions, to be taken into account along with other evidence for or against. We admit, also, that such presumptions may be overcome by evidence on the other side. But we must assert, also, that the improbabilities in this case are of such a kind as to require an enormous amount of evidence to overcome them; that a large amount of the evidence procurable must, to the vast majority of mankind, that is to say, to all who are not themselves mediums, necessarily be at second-hand, and contain hypotheses mingled with its facts; and that the interests at stake are not of such a kind as imperatively to require us to make up our minds  
whether

whether to believe or disbelieve. If the miracles of the New Testament, to which these spiritual manifestations have been, not very reverently, compared, had been performed, not in the open day, in the streets and highways, and on such occasions as naturally offered themselves, but at sittings arranged beforehand, in an appointed place, before a few invited spectators, and by an imperfect light; if all the silly or revolting stories of the Apocryphal Gospels had been mixed up with the canonical narrative in such a manner that both must stand or fall together; if all the petty passions and wayward caprices of the spurious legends were blended into the moral atmosphere of the supernatural together with the purity and holiness of the genuine history; if no living institution perpetuated the memory of its founder, and no important consequences, here or hereafter, depended on our belief or unbelief,—surely these circumstances, though by no means precluding the examination of evidence, would have at any rate seriously increased the difficulty, and in the same proportion diminished the importance, of belief.

We do not approve of this comparison, and we should not have made it of our own choice; but it has been made for us, and forced upon us by the writings of some of the recent defenders of 'Spiritualism,' who have not hesitated to claim for the modern rappings, as for the older ghost-stories, a rank as phenomena of the same kind (they do not yet venture to say of the same degree) with the miracles of Christ and His Apostles. No doubt this is done with a good intent, and in the supposed interests of Christian belief; but the effect on the mind of the reader is, not to raise the modern manifestations to the rank of the Scripture miracles, but rather to sink the latter to the level of a common ghost-story. When Mr. Howitt, for instance, in his preface, tells us that, 'So far from holding that what are called miracles are interruptions or violations of the course of nature, he regards them only as the results of spiritual laws, which in their occasional action subdue, suspend, or neutralise the less powerful physical laws, just as a stronger chemical affinity subdues a weaker one;'—and when in his first chapter, headed 'An Apology for Faith,' after alluding to the spiritual influence acknowledged in the Scriptures, 'from the first page to the last, from the Creation to Christ,' he adds, 'it glows in the Zend-Avesta; it stands mountain-high in the Vedas; Buddhu lives in it in divine reverie; Brahma proclaims it in his Avatars;'—he does, in effect, concur with Professor Powell, in maintaining that 'the constant belief in the miraculous may neutralise all evidential distinctions which it may be attempted to deduce;' and with Mr. Atkinson, the correspondent of Miss Martineau, when he asserts that 'Christ, the prophets, the oracles,

oracles, all exhibit features of the same great fact,' that great fact being Mesmerism.\*

To us, we must confess, so far as such a comparison can be made at all, the strange stories in Mr. Home's book appear far more nearly to resemble the marvels recorded in the Gospel of the Infancy, than the miracles of the genuine Scriptures. Some of Mr. Home's spirits are very Pucks for wanton mischief, reminding us strongly of that 'merry wanderer of the night' lurking in a gossip's bowl for the noble purpose of spilling the ale; others betray the impotent petulance of a spoilt child against some person who has offended him; others appear to delight in tricks of a grotesque and ludicrous character, simply for their absurdity; while nearly all exhibit that aimless love of the marvellous for its own sake, which is characteristic of false miracles as compared with true ones. Take, for example, the following 'spiritual' exhibitions:—

'Mr. Home was then thrown into the trance state, and taking the decanter in his right hand, he walked a few feet from the table, holding it in full view all the time, when, to my astonishment, I saw another decanter, apparently precisely similar to the other, in his left hand. Thus, in each of his hands I saw a decanter; and so real was the second, that I could not have told which of them was the material one. . . . . A little later, Mr. Owen's spirit came, and desired his wife's writing-desk to be placed on the table: and now the room was darkened to see if we could distinguish spirit lights, which were then seen by three of us. Presently we heard the writing-desk opened, and a hand was placed in mine, another in my wife's, and a third in Mr. Home's, each hand differing in size from the others. The alphabet was called for, and "I fear I may have spoilt your Claude," was spelt out. We could not understand this; but when the lamp was relighted, we found that some paint had been taken from the box from inside the desk, and had been freely used on one of my paintings, which hung several feet from where we were sitting.'—pp. 181-2.

Surely this is a worthy companion to the roasted crab and the three-foot stool of the original hobgoblin, unless we suppose that the 'decanter' had something to do with the double vision and the subsequent phenomena. The following is nearly as silly, petulance being substituted for mischief:—

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\* This marvellous correspondence, the preface to which is dated November, 1850, affords a remarkable instance (our modern 'spiritualism' has many such) of the union of the extremes of unbelief and credulity in the same mind. In concluding her portion of the correspondence, the lady is enthusiastic in her gratitude to her guide, philosopher, and friend, for having emancipated her mind from 'the little enclosure of dogma'—that is to say, among other things, from belief in a personal God. In the same autumn of 1850 appeared an account, by the same lady, of the wonderful cure effected by mesmerising a cow! To be sure, Crummie had been bled and physicked, as well as mesmerised; but the cure was attributed to the 'passes made along the spine.'

'We had amused ourselves during the time with the article "Spirit-rapping made easy," in the magazine "Once a Week," which we left on the chiffonier. I saw something pass from the room with great velocity, which vanished under the table. A curious noise was heard, like the crumpling of paper, a spirit hand arose, appeared, and placed in the medium's hand a sheet of "Once a Week," crumpled up and torn. The spirits were at work destroying the magazine; they rubbed it strongly over Mr. Home's shoe, and then placed his foot upon it. The spirits gave each person a bit of the mangled magazine, and the remainder was raised up by a large spirit-hand, and placed on a vacant chair, which, by invisible power, had a short time before been moved from a distance to the table. The table was violently moved up to the centre window, before which stood a piece of the bough of the northern poplar which had been sent from the Château de C——, and which was part of that from the fall of which Mr. Home so miraculously escaped. The height of the bough was three feet eight inches, and the circumference three feet. Luminous hands were now and then visible, the table rose gently, and tipped many times against the bough; the spirits threw bits of the torn magazine about it, and placed one piece under it. I asked, in Hindostanee, "Are you making Mr. Novra do *pooja* \* to the branch?" To which they loudly rapped "Yes."—p. 193.

Sometimes the departed spirit of a pickpocket exhibits a hankering after his earthly vocation; whether from pure mischief or felonious design is not stated:—

'During the séance I had the border of a white cambric handkerchief just appearing out of the side-pocket of my paletot, which was open; and though I could see no agency, I felt something twitching at the handkerchief, and very gradually drawing it from my pocket. Simultaneously with this, my eldest daughter, who sat opposite to me, exclaimed, "Oh! I see phosphoric fingers at papa's pocket!" and, now visibly to all, the handkerchief was slowly pulled out, and drawn under the table; whilst at the same time I felt an arm that was doing it, but which was invisible to me.'—p. 77.

Here is a specimen of the grotesque, reprinted from the 'Cornhill Magazine.' The performer is a table:—

'Turning suddenly over on one side, it sunk to the floor. In this horizontal position it glided slowly towards a table which stood close to a large ottoman in the centre of the room. We had much trouble in following it, the apartment being crowded with furniture, and our difficulty was considerably increased by being obliged to keep up with it in a stooping attitude. Part of the journey it performed alone, and

\* The word *pooja*, we are informed, always denotes worship paid to the Supreme Being: it is never used for any inferior homage. If this information is correct, the above story leaves us between the horns of a dilemma. Either the spirits did not understand the meaning of the word, or they offered divine worship to a block of wood.

we were never able to reach it at any time together. Using the leg of the large table as a fulcrum, it directed its claws towards the ottoman, which it attempted to ascend, by inserting one claw in the side, then turning half-way round to make good another step, and so on. It slipped down at the first attempt, but again quietly resumed its task. It was exactly like a child trying to climb up a height. All this time we hardly touched it, being afraid of interfering with its movements, and, above all things, determined not to assist them. At last, by careful and persevering efforts, it accomplished the top of the ottoman, and stood on the summit of the column in the centre, from whence, in a few minutes, it descended to the floor by a similar process.'—p. 155.

The law of gravitation, indeed, is sometimes entirely suspended in favour of tables, though we have not as yet heard that the same immunity has been extended to other articles of upholstery, or to anything not forming part of the furniture of a room. At one time, a long telescopic dining table is 'made light and heavy at command' (p. 67); at another, the phenomenon is still more extraordinary, if genuine, though apparently not very difficult as a conjuror's trick :—

'The table, which was mahogany, and perfectly smooth, was elevated to an angle of thirty degrees, and held there, with everything remaining on it as before. It was interesting to see a lead pencil retaining a position of perfect rest, on a polished surface inclined at such an angle. It remained as if glued to the table, and so of everything else on it. The table was repeatedly made to resume its ordinary position, and then again its inclination as before, as if to fasten upon us the conviction that what we saw was no deception of the senses, but a veritable manifestation of spirit-presence and of spirit-power. They were then requested to elevate the table to the same angle as before, and to detach the pencil, retaining everything else in their stationary positions. This was complied with. The table was elevated, the pencil rolled off, and everything else remained. They were then asked to repeat the experiment, retaining the pencil and everything else upon the table stationary, except the glass tumbler, and to let that slide off. This also was assented to, with the like result. All the articles retained their positions but the tumbler, which slid off, and was caught in the hands of one of the party, as it fell from the lower edge of the table.'—pp. 33-4.

On another occasion Mr. Home is thrown into a state of ecstasy, in which he is placed under the guidance of a spirit bearing a strong resemblance to Asmodeus in '*Le Diable Boiteux*' :—

'For the first time I now looked to see what sustained my body, and I found that it was but a purple-tinted cloud, and that, as I desired to go onward with my guide, the cloud appeared as if disturbed by a gentle breeze, and in its movements I found I was wafted upward  
until



until I saw the earth, as a vision, far, far below us. Soon I found that we had drawn nearer, and were just hovering over a cottage that I had never seen ; and I also saw the inmates, but had never met them in life. The walls of the cottage were not the least obstruction to my sight ; they were only as if constructed of a dense body of air, yet perfectly transparent ; and the same might be said of every article of furniture. I perceived that the inmates were asleep, and I saw the various spirits who were watching over the sleepers.'—p. 46.

Another spiritual manifestation suggests the ghost of the gentle Katharina, somewhat softened in her temper since the days when in her earthly body she broke the head of the unfortunate Hortensio for telling her 'she mistook her frets':—

'Then the guitar was moved from its place by the spirits, and brought towards the circle ; but, encountering a heavy mahogany chair on the way, *the instrument was laid down, and the chair dragged several feet out of the way* ; after which the guitar was taken up and carried all around the circle by the invisibles, and at length deposited in the opposite corner ! In a few moments more the writer saw it *poised in the air, top upwards, and nearly over his head* ! The remark was made, "Well, if I did not *see* this myself, I wouldn't believe it on other testimony ;"—whereupon the instrument *reached forward and playfully tapped the speaker three times upon the shoulder*. Then it was passed across the table (over his head) towards Mr. Home, whom it lightly touched several times upon the head ! Being close to it during this performance, I watched it narrowly by the aid of the fire-light. The bottom end of the instrument was very near my face, while the opposite end was thus being used ; it was not, in fact, six inches above my head, and just in front of me. *The indistinct outline of a human hand could be seen grasping the instrument just below its centre.*'—p. 59.

The following occurrence admits of two interpretations. The author gives one ; we will venture to suggest another :—

'One evening, at the château, as we were seated at the table, the spirits having requested that the candles should be extinguished,\* the table drawn to the window, and the curtains opened to admit the moonlight, there had been some striking manifestations, and the time had been passing almost imperceptibly to us all, when a gentleman who was present said that he felt much exhausted, and he asked for a glass of brandy-and-water. It was brought, and he took it in his hand, and was about raising it to his mouth, when a spirit hand suddenly appeared, took hold of the lower part of the glass, and disappeared with it under the table. We laughingly said that our unseen friends surely did not believe in the use of stimulants. To this they assented by emphatic raps, and at the same moment the glass slowly rose again

\* The 'requests' made at these spiritual assemblies are sometimes curious. The author of 'Strange Things among us' mentions 'a *séance* at a house situated in a London thoroughfare,' which commenced by requesting that 'Sperrits would be good enough to speak up, 'cos of the 'busses.'

before him empty. The windows being closed, we supposed the water had been thrown upon the floor, and we arose to see where it was. We could discover no trace of it. About two minutes had elapsed, when the same glass, which was standing empty before him, was seen without any visible cause gradually to approach the edge of the table, and to disappear beneath it. I do not believe that above two seconds could have elapsed before it again appeared with the brandy-and-water in it, apparently not less in quantity than when first brought in, though the quality had certainly undergone some chemical change, as it had now lost much of its brown colour. By the raps, a warning was given to all of us against such indulgence.'—pp. 170, 171.

Instead of the 'warning,' we would suggest that, on the homœopathic principle of *similia similibus*, the spirits are themselves fond of spirits; that they drank the brandy-and-water, and substituted a milder liquor in the glass. A German spirit is mentioned by Mr. Howitt as having drunk a glass of beer; why should not a French spirit drink brandy-and-water? \* At any rate we have seen far more wonderful effects produced from a conjuror's bottle.

We will conclude our extracts by a specimen of spiritual logic, which may be entitled 'Signs and tokens to know a grandfather by.' The reasoning is hardly so conclusive as Sir Andrew Aguecheek's,—'I knew 'twas I; for many do call me fool':—

'A strong hand came, stated to be that of my grandfather. I asked, "How am I to know that this is my grandfather?" The hand moved from my forehead to my temple, over my eyebrow and eye, and then passed down over my face, the fingers patting me in the most gentle manner possible. At another time, at my request, hands patted my forehead with such force that the *sound* could be heard, I am confident, in any part of the room.'—p. 52.

We have made these copious extracts from Mr. Home's book, in order to justify our assertion that it contains some stories which almost refute themselves from their exceeding silliness and want of purpose. We do not deny that the book contains also better things than these; but the better and the worse are so linked together as to form a continuous chain; and no chain, as a whole, can be stronger than its weakest link. That such phenomena, or something like them, may have occurred, or seemed to occur, we have no right to deny in the face of respectable testimony; but when we are told that they occurred by means of spiritual agency, we are disposed to comment after the manner

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\* 'What was strangest of all, they saw a jug of beer raise itself, pour beer into a glass, and the beer drunk off.'—*Howitt*, vol. i. p. 64. We should like to have seen the process of visible beer entering into an invisible stomach.

of Pieter Snoye in the ballad of 'Roprecht the Robber,' when the said Roprecht's body had disappeared from the gallows :—

'You may well think we laughed in our sleeve  
At what the people then seemed to believe ;  
Queer enough it was to hear them say  
That the Three Kings took Roprecht away ;  
Or that St. Ursula, who is in bliss,  
With her army of virgins, had done this :  
The Three Kings, and St. Ursula too,  
I warrant, had something better to do.'

If the spirits of the departed can interfere in earthly things, on such occasions and in such modes as these, assuredly there is no occasion, however trivial, and no mode, however ludicrous, in which they may not be supposed capable of interfering. If the laws of material nature can be tampered with in the manner here described, assuredly we have no security for their permanence in any of the ordinary affairs of life. No chemist performing a delicate experiment can be sure that some tricky spirit may not alter the proportions of his ingredients and vitiate the entire result. No cook, preparing some *chef-d'œuvre* of his art, is safe from the danger of unseen hands substituting salt for sugar, or asafoetida for spice. No plain man can buy groceries by weight without the danger of some roguish defunct tradesman aiding the frauds of his successor by 'gravitating' the figs and raisins or 'levitating' the weights. All this, no doubt, seems very absurd ; but we submit that it is not a whit too absurd to be true, if Mr. Home's spiritual manifestations are to be taken as samples of the truth.

In addition to the ludicrous nature of many of these manifestations, there is something painful and revolting to the moral feelings in the idea of a *séance* for the purpose of holding communication with the spirits of the dead. There are times, no doubt, in the life of most, if not of all of us, when we have ardently longed for such a communication if it were possible ; when, in the sense of irreparable bereavement, we have felt that to surrender years of intercourse with the living were a light price to pay for one hour of converse with the dead. But in proportion to the intensity of this longing, is the feeling also of its sacredness and delicacy, as a thing for solitude and privacy, to be kept jealously apart from prying eyes and tattling tongues. The more we love and revere the memory of those we have lost, the more we shrink from the thought of calling up the beloved presence by the arts and devices of necromancy, seeking 'unto them that have familiar spirits, and unto wizards that peep and that mutter ;' the more are we revolted by the thought of making an exhibition of our heart's treasure

treasure to an assembly of spectators, met together to gratify a prurient curiosity or to gather materials for a scientific theory. 'The heart knoweth his own bitterness; and a stranger doth not intermeddle with his joy.'

To show that we are not singular in this feeling, we will venture to quote an expressive passage to the same effect from a work which, under an unattractive title and a dry subject, conceals many vigorous and genial outbreaks of eloquence and fancy. Speaking of *clairvoyance* and spirit-rapping, Professor Ferrier exclaims:—

'These, however, are not to be set down—at least so it is to be hoped—among the normal and catholic superstitions incident to humanity. They are much worse than the worst form of the doctrine of materiality. These aberrations betoken a perverse and prurient play of the abnormal fancy—groping for the very holy of holies in kennels running with the most senseless and God-abandoned abominations. Our natural superstitions are bad enough; but thus to make a systematic business of fatuity, imposture, and profanity, and to imagine, all the while, that we are touching on the precincts of God's spiritual kingdom, is unspeakably shocking. Ye who make shattered nerves and depraved sensations the interpreters of truth, the keys which shall unlock the gates of Heaven, and open the secrets of futurity,—ye who inaugurate disease as the prophet of all wisdom, thus making sin, death, and the devil the lords paramount of creation,—have ye be-thought yourselves of the backward and downward course which ye are running into the pit of the bestial and the abhorred? Oh, ye miserable mystics! when will ye know that all God's truths and all man's blessings lie in the broad health, in the trodden ways, and in the laughing sunshine of the universe, and that all intellect, all genius, is merely the power of seeing wonders in common things?''\*

But we are told by the advocates of spirit-rapping that these manifestations have been vouchsafed to us for a great religious purpose, necessary at this time—to confute the doctrines of materialism, and to give sensible proofs of the immortality of the soul. 'Already,' says the author of the Introduction to Mr. Home's Life, 'Spiritualism, conducted as it usually is, has had a prodigious effect throughout America, and partly in the Old World also, in redeeming multitudes from hardened atheism and materialism, proving to them, by the positive demonstration which their cast of mind requires, that there is another world—that there is a non-material form of humanity—and that many miraculous things, which they have hitherto scoffed at, are true.' To the same effect Mr. Howitt says, 'As materialism has made a great advance, this grand old Proteus of Truth has assumed a

\* Ferrier's 'Institutes of Metaphysic,' pp. 224-5.

shape expressly adapted to stop its way. As materialism has tintured all philosophy, spiritualism has spoken out more plainly in resistance of it.' A noble purpose, assuredly, if the means were but adequate to the end. But what sort of an immaterialism do these rapping *séances* exhibit, and what kind of an immortality is it which they promise us? What an elevating and cheering prospect is held out to the immortal soul on its release from its earthly tabernacle! To lift tables, knock against wainscots, pinch people's knees and pull their dresses under the table, daub pictures, play tricks with brandy-and-water, tear up obnoxious magazines, steal pocket-handkerchiefs, rap people's heads with guitars, and such like! We shall all of us learn to play on the accordion, sometimes in a 'wretched style,' to the great annoyance of the company and of other spirits who play 'most admirably' (see p. 191); and such of us as in this life were 'powerful muscular men,' will enjoy a similar prerogative of lifting heavy 'masses of timber'—a sort of muscular immortality, by way of pendant to the muscular Christianity now so much in vogue (see p. 177). As for the evidence of a 'non-material form of humanity,' the writer seems not to be aware that a wreath of smoke or a vibrating atmosphere is as material as a prize-ox or a stone-wall; that, in short, whatever can be seen, heard, smelt, touched, or tasted, by the bodily senses (rappings and spirit-hands included), is itself bodily, in common with the organs of sense which perceive it. If we are not justified by these considerations in doubting the Christianity of Mr. Home's spirits, we may at least, on his own showing, set them down as 'Christians unattached,' since they appear to have faithfully adhered to him through his several phases of belief, first as a member of the Kirk of Scotland, then as a Wesleyan, then as a Congregationalist, then as a catechumen in Swedenborgianism, and finally as a Roman Catholic; though, on his conversion to the last-mentioned faith, he was assured by his confessor that, as he was now a member of the Catholic Church, his power would not return to him.\*

In addition to these general presumptions, which may be urged, not, perhaps, against the phenomena themselves, but against the 'spiritual' hypothesis adopted to account for them, there are also, as it appears to us, some suspicious circumstances in the particular manner in which the phenomena are manifested. These we shall proceed to mention, as circumstances which, if

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\* We are told that Mr. Home's last conversion has given great scandal to some of the Protestant organs of spiritualism in the press, who, however, console themselves with the thought that he may, perhaps, be destined to convert the Pope to a belief in rapping.

they do not warrant the imputation of imposture, at least suggest the need of extreme caution before we receive the accounts in the form in which they are offered to us.

In the first place, the very circumstance of these phenomena taking place at an appointed meeting or *séance* (the latter has now become a naturalised word in this special signification) is in itself suspicious. People go to these meetings with their expectations raised, and their imaginations excited; they come prepared to see, and desiring to see, something wonderful; and the tone of their minds is thus attuned beforehand into harmony with the marvels that are expected. The influence of imagination, thus excited, on the nervous system, and even on the organs of sense, is a well-known and acknowledged cause, explaining many instances of false or perverted perception. The expectation which made a veteran chemist, on first handling a piece of potassium, apparently feel that it was heavy; the instance mentioned by Sir Henry Holland, of sensations of heat, weight, &c., produced by the mere *show* of the application of a slip of paper to the limb;\* the influence of suggestion and pre-conceived ideas in relation to mesmeric phenomena, as noticed by Dr. Carpenter;† the cures effected by Dr. Haygarth's painted tractors, and a hundred other instances, may be cited to show the effect (now, indeed, generally admitted) of expectation, on persons of excitable temperament, in bringing about the phenomena expected. We do not adduce this fact as a sufficient explanation of Mr. Home's exhibitions; but we mention it as suggesting a caution that phenomena taking place at a *séance* should be received with more suspicion than those which present themselves without any such preparation.

In the second place, the article of furniture almost invariably employed in these manifestations is of a character liable to be suspected. A table, as compared with most other pieces of furniture, has a greater amount of leverage in proportion to its weight; it has, moreover, a large vacant space under its broad surface, which leaves room for the application of the power; and it furnishes, through its usual companion the table-cloth, an easy means of concealment. We do not say that these facilities are actually put in requisition by professors of the rapping art; but a writer in 'Once a Week' has published an ingenious description, with pictorial illustrations, showing the use that *might* be made of such means; and it would be well that our accredited mediums, like Cæsar's wife, should be not only above guilt, but also above suspicion. Surely it is in their own power to clear

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\* 'Chapters on Mental Physiology,' p. 25.

† 'Human Physiology,' 4th edition, pp. 860, 861.

themselves.

themselves. To spirits so muscular as some of Mr. Home's familiars have shown themselves to be, it can be of very little importance whether their forces are exerted on a table or on some other piece of upholstery. If they would only move a bookcase without feet, resting entirely on the floor, or a sideboard, or some other article of similar character, it would be a great boon to those sceptical persons who are fond of suspecting mechanical agency, and for the removal of whose materialistic doubts we are told that these demonstrations have been especially granted.

In the third place, it is suspicious that nearly all the higher manifestations of spiritual presence require to be exhibited by an imperfect light; and that on some occasions, as we have seen, the spirits themselves request that the candles may be extinguished. It is true that midnight has been from time immemorial the orthodox hour for ghostly apparitions, and cock-crow the signal for their vanishing; but surely the presence of a candle or a lamp is not incompatible with the due observance of the witching hour. Doubtless there may be spiritual reasons, of which we know nothing, why darkness should be preferred to light; but, unhappily, those sceptical materialists, who are the very persons who most need to be convinced, will persist in saying that the same darkness, which is indispensable to the true manifestation, is also favourable to the false.

In the fourth place, we should very much like to have a fuller account of the rise and progress of the knocking language, from its origin in the Hydesville farmhouse to the present time. By what means did a system of purely arbitrary signs come to be established conventionally as a medium of communication between two orders of beings who are supposed to be incapable of communicating without it? If, as we are informed by the initiated, three raps signify *yes*—one, *no*—and two, the need of further information—who was it that gave these particular significations to these particular sounds, and how did he make it known that he had done so? If the spirits can talk the language of mortals, the knocking language is superfluous; if they cannot, how did the knocking language itself acquire a meaning? There is a third supposition which naturally suggests itself, namely, that some of the spirits can talk and some cannot; and that the talking spirits instituted the language for the benefit of the dumb ones. But as knocking has now become the established and normal means of communication, we have still to inquire what is the reason why such a melancholy deprivation of speech should have befallen the whole spirit world, with the exception of one or two garrulous interpreters. This mystery, if it could only be cleared up, might throw

throw some light on the vexed question of the origin of language in general. The French philosopher, Maine de Biran, has well stated the difficulties of this question, in a passage which we will transcribe in the original language :—

‘Pour que ces premiers signes donnés deviennent quelque chose pour l’individu qui s’en sert, il faut qu’il les institue lui-même une seconde fois par son activité propre, ou qu’il y attache un sens. Supposé que Dieu eût donné à l’homme une langue toute faite, ou un système parfait de signes articulés ou écrits propres à exprimer toutes ses idées ; il s’agissait toujours pour l’homme d’attribuer à chaque signe sa valeur ou son sens propre, c’est-à-dire, d’instituer véritablement ce signe avec une intention et dans un but conçu par l’être intelligent, de même que l’enfant institue les premiers signes quand il transforme les cris qui lui sont donnés par la nature en véritables signes de réclame.’ \*

If any professor of spiritualism will inform us when and how the spirit-language was converted from unmeaning knocks into significant symbols, when and by what means mankind was informed of the fact that *rat-tat-tat* is equivalent to *y-e-s*, and other knocks to other verbal signs, he will have done much towards supplying a solution of the problem whose difficulties are thus clearly stated by the French metaphysician.

In the fifth place, the knocking language, supposing it to have been established by some means or other, is again liable to suspicion in its own nature and in the mode of its employment. Sounds of this kind are the most easy to produce by mechanical means,† and are, moreover, in many cases by no means easy to trace to the exact quarter from which they come. A well-known anecdote narrated by Dr. Reid may be cited in illustration of this point. ‘I remember,’ he says, ‘that once lying a-bed, and having been put into a fright, I heard my own heart beat ; but I took it to be one knocking at the door, and arose and opened the door oftener than once, before I discovered that the sound was in my own breast.’ ‘It is probable,’ he continues, ‘that, previous to all experience, we should as little know whether a sound came from the right or left, from above or below, from a great or a small distance, as we should know whether it was the sound of a drum, or a bell, or a cart.’ ‡ The discovery of the cause and

\* ‘Nouvelles Considérations sur les Rapports du Physique et du Moral de l’Homme,’ p. 93.

† Governor Tallmadge reprints a passage from the ‘North British Review,’ in which it is asserted that the noise is produced ‘by the displacement of the tendon of the *peroneus longus* muscle ;’ but his only reply is to charge the writer with ‘ignorance and folly, not to say superstition and bigotry.’ We can only say that we have actually heard the sound produced in this manner, but, of course, not by a ‘medium.’

‡ ‘Inquiry into the Human Mind,’ chap. iv., section 1.

direction



direction of the sound will of course be more difficult when the attention of the hearer is directed to another object, as is the case when, according to the approved mode of spiritual intercourse, he is employed in repeating the alphabet, waiting for the assenting knocks when he comes to the right letter. Besides diverting the attention, this mode of communication may also furnish a clue to the answer required. Let us suppose, for instance, that the first expected letter is E. The anxious patient, already excited by the promise of an interview with an inhabitant of the other world, begins, as quietly as he or she can, to spell through the alphabet in succession. A—no answer; B—ditto; C—ditto; D—ditto. Thus far the spirits are clearly in the right. Can they really be true spirits, and will they rap when the fatal letter comes? The letter E comes in its turn; a slight tremor betrays his anxiety; and the astute spirit, or his representative, raps out the affirmative signal. The patient is still more excited by this partial success; and his increasing anxiety manifests itself still more clearly as he comes to the other letters in their order. We do not say that such things are; but the mere possibility that such things may be, suggests a caution.

In the sixth place, it seems a suspicious circumstance that the old-fashioned visible ghost has in these modern *séances* been almost entirely superseded by the *Poltergeist* or noise-making spirit. The theory of optical illusions has been the subject of much scientific inquiry, and is now tolerably well understood; while that of acoustical deceptions has been by no means so fully investigated. Shifting his ground with the advance of science, the ghost, so far as he professes and claims to be a true ghost and not a spectral illusion, has retired from the field of vision, and taken refuge in that of hearing. A partial exception must be indeed admitted in the case of some of Mr. Home's exhibitions, at which, as at the recomposition of St. Gengulphus,

‘Two hands assist, though nipped off at the wrist;’

but in the matter of these spirit-hands, the recent exponents of spiritualism seem hardly consistent with each other. Mr. Home asserts that the spirits manufacture (or rather *facture* without *manu*) hands for themselves, ‘incarnating them out of the vital atmospheres of those present,’\* and ‘that the presenting spirits could often make one finger where they could not make two; and two, where they could not form an entire hand; just as they

\* What is meant by a person's ‘vital atmosphere’? That which one exhales after consuming the oxygen is anything but vital, as all dwellers in overcrowded rooms know well. Or is the word *vital* used after the manner of *lucus a non lucendo*, and do the spirits ‘incarnate’ their hands out of azote?

could form a hand, where they could not realise a whole human figure; and he also said that this was one reason why they did not show themselves aboveboard, because they did not like imperfect members to be seen.' Mr. Howitt, on the other hand, who regards all spiritual manifestations, ghosts included, as the results of one and the same universal principle, agrees with Stilling and Swedenborg in holding that 'the animated spirit, the divine spark in man, is inseparably united with an ethereal or luminous body.' Hence arises a question—Is this ethereal or luminous body visible or invisible to mortal eyes? If visible, what is the need of incarnating hands out of vital atmospheres; and why are hands alone, and not whole human figures, visible at Mr. Home's *séances*? If invisible, how comes it that the old-fashioned ghost managed to make himself seen from head to foot; and not himself only, but likewise the ghost of a dress, which, with a due regard to modesty, he used to put on? If he 'incarnated' his body from the vital atmosphere of the single individual to whom he generally appeared (and his dress, we must suppose, from the atmosphere of that individual's habiliments), why cannot one of Mr. Home's spirits do as much from the united atmospheres of a whole well-clad company? If he succeeded in making his luminous body (and garments) visible without incarnation, why has that power so lamentably degenerated in the grander and more advanced manifestations of the present day? The apparitions, like the figure of Prior's Nut-brown Maid, have become 'fine by degrees and beautifully less,' till we are reduced to the condition of the ghost-seers in Branksome—

'Some saw an arm, and some a hand,  
And some the waving of a gown.'

If this diminuendo scale goes on much longer, these visible apparitions run a serious risk of sharing the fate of Duncan McGirdie's mare,—vanishing altogether just as the science which operates upon them has arrived at its full perfection.

Against these presumptions, we have to balance on the other side the respectable character of Mr. Home, and the improbability of his being a party to any imposture. And this consideration, so far as we have the means of judging, is fully entitled to be taken into account; but it must be acknowledged that there is, to say the least, an enormous weight of improbability, and even of apparent absurdity, resting on the credit of a single man. We say, of a single man; for the admissibility of the collateral witnesses mainly depends on the credit to be given in the first instance to their principal. If the phenomena are really what they are said to be, these witnesses furnish so many independent  
testimonies

testimonies to the nature and number of the phenomena so produced ; but if, on the other hand, the medium is an impostor, the other witnesses testify only to the fact of their having been imposed upon.

A favourite argument of the advocates of spiritual agency, from the *impossibility* of such phenomena being produced by natural means, is one to which we cannot attach much weight. Many seeming impossibilities of this kind have actually been performed by natural means, which, were it not for the confession of the performers, might pass for as good spirit-manifestations as the majority of Mr. Home's exhibitions. Take, for example, the following specimen, exhibited before Louis Philippe at St. Cloud, by M. Robert Houdin :—

‘ I borrowed from my noble spectators several handkerchiefs, which I made into a parcel, and laid on the table. Then, at my request, different persons wrote on cards the names of places whither they desired the handkerchiefs to be invisibly transported. When this had been done, I begged the King to take three of the cards at hazard, and choose from them the place he might consider most suitable.’

Of the three places thus proposed, the King chooses that the handkerchiefs be sent ‘ into the chest of the last orange-tree on the right of the avenue.’ The narrative continues :—

‘ The King gave some orders in a low voice, and I directly saw several persons run to the orange-tree, in order to watch it and prevent any fraud. I was delighted at this precaution, which must add to the effect of my experiment, for the trick was already arranged, and the precaution hence too late.

‘ I had now to send the handkerchiefs on their travels ; so I placed them beneath a bell of opaque glass, and, taking my wand, I ordered my invisible travellers to proceed to the spot the King had chosen.

‘ I raised the bell ; the little parcel was no longer there, and a white turtle-dove had taken its place.’\*

We must give the conclusion of the story in an abridged form. It is sufficient to say that the orange-tree chest was opened by one of the King's servants, who drew from it ‘ a small iron coffer, eaten by rust.’ The key was found hanging to the neck of the turtle-dove ; and the box, being opened, displayed a packet, carefully sealed with the seal of Cagliostro, which was torn open by the King and found to contain the six handkerchiefs which a few moments before were lying on the conjuror's table.

If we wished for an easy and lazy mode of explaining this feat, we should at once have recourse to the theory of spirit agency. This theory has the advantage, in common with the famous walk

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\* ‘ Memoirs of Robert Houdin,’ vol. ii. p. 77, sqq.

of St. Denys, that it is only the first step that is at all difficult of belief. If it is once admitted that spirits are in the habit of taking part in mundane affairs in the manner asserted by Mr. Home and his brethren, we have no means of testing the limits of their power, and therefore we have no difficulty in attributing all extraordinary occurrences to their intervention. We may easily suppose, then, that some spirit, possibly that of Cagliostro,\* placed the handkerchiefs in the packet, sealed them with his seal, and deposited them in the place where they were found; indeed, so plausible is this hypothesis, that Mr. Howitt, who notices the story, seems half inclined to convert Robert Houdin, *bon gré, mal gré*, into a spiritual medium. 'The feat of Houdin at St. Cloud,' he says, 'was either done by great previous preparation and collusion on the part of the people of the palace, or it was not mere sleight of hand. To send several handkerchiefs out of a room, in the presence of spectators, into the palace garden, introduce them into the tub of an orange-tree guarded by officials, into an old iron chest, and under the root of the tree, requires something more than the cleverest legerdemain.' Unfortunately, M. Houdin himself refuses to be converted into a medium for the sake of a theory; and, though in this instance he confesses to preparation, he denies collusion. All his feats, he tells us, are performed by real sleight of hand, and without the aid of accomplices. We doubt whether any person, except a professed *prestidigitateur*, could explain by what means this and many other of M. Houdin's marvels were performed; but we do not therefore doubt that they were performed by natural means of some kind or other.

We should be inclined at once to adopt a similar conclusion with regard to many of the performances recorded by Mr. Home (others perhaps would more naturally suggest an abnormal condition of the mind or the nerves), were it not for his own positive declarations to the contrary. And it is this dilemma, and this alone, which, in the case of this extraordinary autobiography, drives us to the third course of absolute suspension of all judgment. It is impossible to believe, without violating all the ordinary rules of credibility; and it is impossible to disbelieve, without imputing frauds which we have no means of proving. But if the whole superstructure of this marvellous narrative is to

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\* Cagliostro is rather a favourite *Deus ex machinâ* with our modern spiritualists, but unfortunately their accounts of him do not agree together. Mr. Howitt mentions a woman having the gift of mediumship, who 'saw Cagliostro, and perceived that he had spiritual power, but used it as a necromancer.' To Mr. Home, on the contrary, his spirit appears in brilliant light and with 'three wafts of perfume,' and states that his power was that of a mesmerist, but all-misunderstood by those about him.

rest, as it seems at present to rest, on the credit due to Mr. Home's personal testimony, we are at least justified in demanding, as a preliminary condition, that a satisfactory account should be given of one or two unpleasant circumstances, which, so long as they remain unexplained, prevent us from receiving that testimony as wholly above suspicion.

It has been asserted, for instance, by a writer in 'Once a Week' (vol. iii. p. 405), that when Robert Houdin was summoned before the Emperor of the French to see Mr. Home, no manifestation took place. Mr. Home, who is at the pains to contradict many of the statements of the press concerning his adventures in France, takes no notice of this.

It has been asserted, again, by a writer in 'All the Year Round' (vol. vii. p. 608), that a gentleman who 'had been trumpeted about London as the most wonderful of all the wonderful mediums ever wondered at' (can this be any other than Mr. Home?), could succeed in nothing when he was attentively watched by five persons seated in his own room, at his own table; of which five persons, the writer was one, the conductor of the journal another, and M. Robin, of the Egyptian Hall, a very dangerous third.

It has been asserted, again, by the same writer, that the same medium, having undertaken to communicate with the spirit of a deceased friend of the writer's, elicited no responsive rap to any name out of a long list, with the exception of that of an eminent public character recently deceased—the said eminent person not being the friend thought of by the writer, but being the only one on the list whom the medium must have known to be dead.

Another circumstance, not as yet satisfactorily explained, is the anachronism, already noticed by two of Mr. Home's critics, in connexion with one of his *séances* at Paris. In a hotel situate on the Boulevard des Italiens, Mr. Home met two English officers just returned from the Crimean campaign. While talking together, they were visited by a spirit who spelt out on the alphabet the name of 'Gregoire,' and informed them that he had passed from earth, giving the time of his departure. The two officers were incredulous, for they recognised the name of an intimate friend in the French army, whom they had left in the Crimea slightly wounded, but apparently in no danger. On subsequent inquiry, however, it was ascertained that the French officer had actually died at the time mentioned by the spirit. This occurrence, as originally narrated in Mr. Home's 'Life,' is placed among the events occurring during a visit to Paris in the latter part of 1857—more than a year after the termination of the Crimean War. In a subsequent letter, published in the

*Times*

*Times* of April 16th, 1863, Mr. Home so far corrects his original statement as to place the event in the autumn of 1856. But as the Crimean War ended in the May of that year, it is still difficult to understand why an officer only slightly wounded should have lingered on the spot to die there in the autumn. The inaccuracy is the more remarkable, inasmuch as the occurrence, according to Mr. Home's later statement, took place during the year in which the spiritual power had left him, and could hardly have failed to be noticed as a signal exception.

We mention the above circumstances as matters connected with Mr. Home's history which require explanation, and which, till they are explained, prevent us from putting implicit faith in his narrative. Yet we are bound to state, on the other hand, that the general tone of his book resembles that of a man who writes with simplicity and good faith, and that his intellectual calibre, as exhibited in his writings, seems hardly compatible with any great amount of brilliant invention or consistent simulation. If he should turn out, after all, to be a wolf in sheep's clothing, he may at least claim the credit of having worn the borrowed fleece with an air of sheepishness which looked very like nature.

If Mr. Home is the Mohammed, Mr. Howitt may fairly claim to be the Ali of spiritualism. He writes in a temper which savours strongly of the declaration of that zealous vizier of the prophet, 'Whosoever rises against thee, I will dash out his teeth, tear out his eyes, break his legs, rip up his belly.' He furnishes a startling instance (not the only one in our day) of the fiercely pugnacious qualities which may be developed from the peaceful training of the Society of Friends. Poor Bishop Douglas has the misfortune to take a different view from Mr. Howitt of the miracles performed at the tomb of the Abbé Paris; and our energetic champion of spiritualism gives vent to his feelings in the assertion that 'the *mildest* term for Bishop Douglas's Criterion is an infamous book, fraught with the most frightful falsehoods penned in the very face of the most remarkable, most irrefutable mass of official and other evidence perhaps ever brought together'—a specimen of mildness which reminds us of some of the speeches of Boatswain Chucks in 'Peter Simple,' beginning with, 'Allow me to observe, my dear man, in the most delicate way in the world,' and ending with, 'Do it again, and I'll cut your liver out.' Nonconformists are not much better treated than bishops. Dr. Calamy, for his opposition to the miraculous pretensions of the Cevennois, is facetiously metamorphosed by Mr. Howitt into 'Dr. Calumny.' Nor is Friend William's noble rage entirely exhausted by the publication of his book: it breaks

out

out again in a letter published in the 'Spiritual Magazine,' in which he says of his reviewers in general, 'In almost every instance the so-called criticisms have been a series of deliberate falsehoods;' and of one luckless wight in particular, 'There must have been some radical impenetrability in his nature to the grand principle of truth: his training would seem rather to have been under the especial care of that very ancient and paternal professor known as the Father of Lies.' Assuredly, if Spiritualism is destined hereafter to rise to the rank of a liberal art, it has not yet proved its claim to the title by softening the ferocity of its disciple's manners.

Sometimes, however, Mr. Howitt's denunciations are accompanied by blunders so ludicrous that the indignation they are intended to excite in the reader explodes prematurely in a fit of laughter. Of the *bête noire* of his book, Bishop Douglas, he says: 'This system [a system for the annihilation of Christianity] was adopted with avidity by the infidels of France . . . and it had now travelled back to England from France with wonderfully augmented effect under the excitement of the French Revolution. There was a new atmosphere for a new champion to work in; and Douglas therefore came out with a bolder and more dogmatic mien. He professed to combat David Hume, but in reality he fought most vigorously on his side.' The reader who remembers Goldsmith's 'Retaliation' may be somewhat startled to find 'the scourge of impostors, the terror of quacks,' cited as a disciple of the French Revolution; but the 'Criterion' might perhaps be a work of the author's old age. The simple fact, however, is, that Mr. Howitt has mistaken the second edition of the 'Criterion,' published in 1807, for the first, published in 1754; and, under the influence of this erroneous date, has invented the influence of the French Revolution from his own imagination. In another passage, Mr. Howitt denounces the Church of England in general, in the following eloquent and classical language: 'Look onward still, and behold the learned professors of arts and sciences, with their souls all shrivelled up by the exsiccating process of this Anglican drying-house, and whose looks and words are of the purest dryasdust order—*capites-mortuum-men*, of the earth, earthy.' Could not the same spirits who, we are gravely told, have more than once enabled people to speak Greek without learning it, have inspired their latest champion with two words of correct Latin?

The same habit of inaccuracy manifests itself in other parts of Mr. Howitt's book, rendering it, however amusing as a collection of stories, almost worthless for any other purpose. Though the whole tone of the book is fiercely controversial, the author never  
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seems to have understood clearly what is the conclusion which the controversy is intended to establish, or what premises are required to establish it. Statements the most inaccurate are assumed as the basis of reasonings the most irrelevant. His subordinate details and illustrations and the conduct of his main argument both exhibit the same characteristics of careless assertion and confused thought. He cites Dr. Johnson as a believer (in common with himself) in the Cock-lane ghost; though Johnson, in fact, was one of those by whom the imposture was detected. He quotes Rogers, the poet, as pronouncing 'Spiritualism'

'That oracle to man in mercy given,  
Whose voice is truth, whose wisdom is from heaven;'

whereas Rogers is speaking, not of 'spiritualism' in any form, but of the *mariner's compass*! He adduces in evidence the ghost that appeared to Shelley and uttered the words *siete sodisfatto*; though the very biographer whom he quotes adds, that 'the dream is said to have been suggested by an incident occurring in a drama attributed to Calderon,' and another of Shelley's biographers gives a full account of the very work from which the apparition and the question were borrowed. He charges Niebuhr with rejecting the miraculous stories in Livy, probably with the intention that the same system should be applied to the Bible; though Niebuhr has recorded his belief in the miracles of the New Testament in language as clear and emphatic as it is possible for man to use. This last statement, indeed, is in accordance with Mr. Howitt's whole argument, the purport of which is to leave no middle course open between the hardest rationalism and the blindest credulity; to allow of no reasonable belief in the miracles of Scripture, except on condition of believing also in the Cock-lane ghost and the Drummer of Tedworth. He seems to divide all mankind into two great classes, those who believe everything that is supernatural, and those who believe nothing; the former representing the good principle of humanity under the name of Spiritualists, the latter representing the evil principle—being all of them, consciously or unconsciously, virtually or actually, Materialists.

It is difficult, in reading Mr. Howitt's book, to maintain the balance between the respect that is due to the excellence of his intentions and the regret which we must feel at the extreme want of judgment manifest in his performance. With a deep and earnest conviction of the divine authority of Scripture, he has given expositions of the sacred text which, it is to be feared, will rather furnish mirth to the scorner than edification to the believer. The writer  
who



who can find in the Transfiguration an authority for seeking to the spirits of the dead, and who sees in spirit-rapping an illustration of the words, 'Behold, I stand at the door and knock,' is not likely to instil into the minds of his readers that reverence for Scripture which he evidently feels himself. But perhaps the most singular and the least trustworthy part of Mr. Howitt's book is that which treats of spiritualism and materialism in the Church of England. Ignoring all distinction between ordinary and extraordinary, invisible and visible, exercises of spiritual power, he treats the writers whom he criticises as if all 'spiritualism' were of one kind, and must stand or fall as an indivisible whole. Divines who venture to doubt whether visible miracles have been continued in the Church up to modern times, or whether satanic agency is now manifested in sensible phenomena, are treated as unbelievers in all spiritual influence, good or evil; while, on the other hand, passages written in defence of the Scriptural miracles, or in recognition of those unseen spiritual influences which all Christians acknowledge, are pressed without scruple into the service of 'Spiritualism' in general, including ghost stories, table-turning, and spirit-rapping.\*

But the great stronghold of Mr. Howitt's argument is America. All the great mediums of the present day have been Americans, or from America; and the various physical manifestations of spiritual agency have been far more powerfully exhibited in America than here. This is attributed partly to the fact that the Americans are conspicuously a more nervous and excitable people than we are, and partly to the circumstance that 'our denser atmosphere, less electrical and magnetic in its character, and our different telluric conditions, are less favourable to the transmission of spiritual impressions.' The former supposition seems to suggest a subjective illusion rather than an objective apparition; and the latter seems better adapted to the theory of a material than of a spiritual impression. But if the American manifestations have an advantage over those of other countries in number and frequency, they can scarcely be said to exhibit a corresponding superiority as to quality. We are glad to pass as hastily as we can over the coarser and more profane examples which are to be found in the voluminous records of Transatlantic spiritualism—the lady who was brought to bed of a motive force, the doggrel verses purporting to emanate from the Saviour himself—compounds of the ludicrous and the horrible, in which

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\* We may instance his treatment of Douglas, Paley, and Bishop Marsh on the one side, and of Hooker, Tillotson, Sherlock, Ken, Penrose, and Le Bas on the other.

the laugh due to their absurdity is checked by the shudder at their blasphemy.\* We prefer to call attention to one or two instances of a higher kind, which, from their own character, compared with the respectability of the witnesses by whom they are attested, may be fairly or even favourably selected as crucial tests of their class. For profession, station, and character, it would be difficult to select three more unexceptionable witnesses than George T. Dexter, an American physician, John W. Edmonds, sometime Judge of the Supreme Court and of the Court of Appeals, and Nathaniel P. Tallmadge, late U.S. Senator and Governor of Wisconsin, the three gentlemen whose names appear as sponsors to two bulky volumes on 'Spiritualism,' the former of which, if its title-page may be trusted, had reached a tenth edition in 1854.

It seems that the American spirits, whether owing to the excitability of the Yankee nervous system, or to the electricity of the atmosphere, or to any other cause, have been peculiarly successful in the invention of means of communication with the nether world. In addition to the knocking alphabet, they have discovered the happy and more direct device of spirit-writing, by which the arm of the medium is acted upon from without, and compelled to write down whatever the presiding spirit dictates. In this manner were compiled the above two volumes of spiritual communications, written by the hand of Dr. Dexter, chiefly from the dictation of the ghosts of Bacon and 'Sweedeborg,' the latter name, whether at the request of the owner or not, being invariably spelt with two e's.

The following specimens are interesting as showing the English style of the golden-mouthed Chancellor in his spiritual state of existence. The reader will be able to judge how far, according to his own statement, he has 'progressed' since he left the earth:—

'If you feel that the teachings of the spirits are beautiful, and if the views which they have presented to your mental eye elicit emotions of joy, how much more will you realise the ecstatic pleasure in store for you when death shall have opened the glorious realities of spirit-life! Eye hath not beheld, human heart hath not conceived, the truths that death will unfold. Oh! when the last pulse is fluttering, when the heart's throb is almost past, when gasping and struggling in the pangs of expiring mortality, then, then will your spirit-eye behold the gates of immortality opening before you, and your soul catch a glimpse of the gorgeous beauties of death. . . . Eloquent? Who

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\* Some account of these will be found in an article in the 'Westminster Review' for January, 1858.

would not be so when he is trying to illustrate the joy, the unspeakable emotions that fill every sentiment of his spirit? Swedenborg tells you that any step taken in advance on earth produces a corresponding accordance in the spirit-world; and our congenialities are so intimate, that an elevated expression, an idea uttered in harmony with the realities of our existence here, meets with a response in our souls, and produces emotions simulating your own. . . . Thus it was, while listening to your reading, that my internal was excited by the emotions of your minds; for know that when there is accordance between two minds on earth, it increases the electric affinities and makes easier the power to communicate. Thus, I say, it was that my internal was prompted by your minds, and I felt myself compelled to give utterance to the sentiments I have expressed. I beg you to understand that my nature has somewhat progressed \* since I have left the earth. I am not that dull matter-of-fact spirit as I was when a man on earth; but I feel that each day unfolds some new attribute of my soul, some higher power to feel, to comprehend, what I so much desire to know, and that I can realise more clearly the high and important duties I have to perform,' &c. &c.

It needs not to be a medium, or a man of science, or a conjurer, to apply the test furnished by this passage:

'Qui Baviu non odit, amet tua carmina, Mævi.'

If any man, woman, or child who has read three pages of Bacon's writings can believe that the great Chancellor, in the flesh or out of the flesh, could give utterance to the above pompous platitudes, such a person is worthy to believe all the extravagances and absurdities recorded in the ample library of American spiritualism. On another occasion Bacon takes leave of the company with the truly Yankee valediction, '*I guess* we will all go home; and so, good night.' The communication which was closed in this characteristic manner, contained the following eloquent and logical denunciation of the opponents of spiritualism. The comparison of truth to a mist, and error to the sun, may at least claim the merit of a novel use of a hackneyed image:—

'Let the dog bark, the cat mew, or the ass slavishly toil for mere

\* We have somewhere seen the use of the verb to *progress* censured as an Americanism. The criticism is not quite accurate; witness Shakspeare,—

'Let me wipe off this honourable dew  
That silverly doth progress on thy cheeks.'

We strongly suspect, however, that if the Yankee Bacon had dictated his posthumous communication aloud, the word would have been pronounced with a nasal accent and an emphasis on the final syllable. The next sentence, 'I am not that dull matter-of-fact spirit *as I was*,' is at any rate a conclusive proof how far Bacon has 'progressed' in his mastery of English.

animal existence ; still nature will assert its just claims, whether in man or brute. And to him who, without evidence of either right or wrong, can denounce that as untrue which he has not investigated, you may justly attribute the true prerogatives of his nature. He will bark dog-like to the compulsion of his brute-like organisation ; and he will toil like the ass, to perpetuate the slavery of opinions to which he is bound by error and prejudice. It is not worth while to contest the truth of spirit-revelation with those who do not believe. Truth is like the misty vapour encircling the mountain's top. The sun of error, of superstition, of priestly teachings may, in its full blaze, dissipate the cloud, but its cloudy substance is disseminated through the whole atmosphere, and descends in grateful showers to replenish and fructify the thirsty earth.'

In the Appendix to this volume, among other stuff of the same kind, is a communication from the spirit of John C. Calhoun, who writes, not through a medium, but with his own hand, the words 'I'm with you still.' Governor Tallmadge's comment on this short sentence, first on the *I'm*, and then on the whole, is worthy to rank with Mr. Puff's explanation of Lord Burleigh's shake of the head :—

'We have not only the most unequivocal testimony to the hand-writing itself, but, lest any skeptic should suggest the possibility of an imitation or a counterfeit, this abbreviation, peculiar to himself, and known only to his most intimate friends, and which no imitator or counterfeiter could know, is introduced by way of putting such a suggestion to flight for ever !

'This sentence,' continues the 'Critic,' 'is perfectly characteristic of Calhoun. It contains his terseness of style and his condensation of thought. It is a text from which volumes might be written. It proves—

- '1. The immortality of the soul ;
- '2. The power of spirits to revisit the earth ;
- '3. Their ability to communicate with relatives and friends.
- '4. The identity of the spirit to all eternity.

How one's soul expands with these sublime conceptions ! How resistless is this testimony of their truth ! How surprising that men can doubt, when this flood of living light is poured upon them by spirits who, in the language of Webster, "revel in the glory of the eternal light of God !"

The logic which concludes that a writer using the abbreviation 'I'm' must be Mr. Calhoun or his ghost, is on a par with that of the gentleman who discovered his grandfather by the infallible token of a hand passing down his face. We are not told what sort of a hand Mr. Calhoun wrote ; but if it was not more legible than those of some other spirits, of which facsimiles are given in  
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the same volume, it would be difficult to decide whether he used the abbreviated form or not.\*

In contrast to these great men, we are favoured by Judge Edmonds with the following communication, spelt through rappings, from an illiterate spirit, who tells us that his name was John Jones, and that he 'leived anywhere where they

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\* The same Governor Tallmadge has written an introduction and appendix to another 'spiritual' book, called 'The Healing of the Nations.' Of the book itself, a *sarrago* partly of commonplace and partly of nonsense, expressed in the bombastic language in which American eloquence delights, the following samples will probably be thought quite sufficient:—'When presumptuous man useth his individuality to try and substantiate the existence of a being which would re-create chaos by its very existence, it were far better that he had never been born than to thus live in vain.' . . . 'Flesh-pots, or dead bodies in their stench, though they are outwardly useful unto creation—for there is nothing wasted—do not appear half so lovely, or are not half so acceptable, as the living, burning light within.' Yet of this book Mr. Tallmadge says, 'Many literary and scientific gentlemen have examined the original volume, and pronounce portions of it beyond human conception. The style is simple and faultless, and adapted to every capacity. The most astute critic cannot strike out a word in a single sentence, and substitute another which he can truly say will improve it in style or sentiment.' In his own portion, Mr. Tallmadge gives us, among other things, a communication from Shakspeare, and another from the Evangelist St. John! The former, of which he says that 'no spirit, in or out of the body, except the spirit of Shakspeare, could have written it,' contains the following among other directions to a player, in which the reader no doubt will recognise the author of Hamlet:—

'To act requirerth two things—a brain and an eye; the scene will do almost all the rest.

'The eye calleth up and *holdeth* [the italic marks are the spirit's own] the magic spell, which in the audience centers.

'The brain the gestures makes—the stand, the position; and grace doth take therefrom its own existence.

'Thou may'st stand majestically, thou may'st even speak well, and in every action proclaim the *will* and sentiment of that which thou art imitating; but death is there, if the eye's fierce light doth not illuminate the hating passion.

'The eye, the eye; without it man were blind, and play could ne'er be acting.'

Shakspeare, like Bacon, has 'somewhat progressed since he left the earth.'

The following is something more than absurd, and raises other feelings besides those caused by its absurdity. It was communicated, 'letter by letter, through the tipplings of the table':—

'Lo an assembly of wise men from the East and from the West, and the North and the South, lawyers and doctors, judges and governors, and divines, are met to try the spirits. Beloved, ye do well. Ye are instructed from the Great Book of Books, even the Book of God, thus to proceed. Beloved, if all spirits were evil, or if all spirits were good, this trial would be useless. By their fruits ye shall know them. Beloved, can the leopard change his spots, or the Ethiopian his skin? When the spirit leaves the earthly form for a spiritual, the spirit is the same, but in a new temple. My little children, ye have the privilege to make that new mansion an abode of happiness or misery, &c.

'JOHN THE BELOVED.'

This is only paralleled by the almanac-maker who figured in a recent trial as having exhibited in a crystal ball 'Titania as she appeared in a chariot, and St. Luke as he appeared on several occasions,' and both speaking English. If St. John, why not St. Luke? If Shakspeare, why not one of Shakspeare's creations?

would

would keep him.' The reader may determine for himself 'which is the wiser here, Justice or Iniquity':—'You have got to hear my story fust. I am happy now, since I have larnt how for to wrap. You must pity my ignorance instead of laughing. I can tell you, I am sorry I lived as I did; but no decent man would speak to me when I wanted to reform, and now I am not abel to converse as wel as a littel infant, because I have nobody to larn me how. Now do remember the poor; and remember that poverty makes them bad. You must not pas them by.'

That such a work should have reached a tenth edition in the year after its first publication, is of course a strong encouragement to the manufacture of other articles of the same kind. Writings from the other world seem now to have become part of the regular stock in trade of American literature, and may be expected as part of the contents of every catalogue of new publications. One of these precious documents is now lying before us, purporting to be the production of the spirit of Tom Paine, through the mediumship of a Mr. Wood. The editor, a Mr. Burbank, vouches for it as 'a work of singular merit,' the beginning of what was designed to be 'a stupendous production' in thirty volumes of three hundred pages each. This design has, happily for readers, been abandoned; and the spirit of the notorious Tom has confined his communications for the present within the modest limits of a single pamphlet, which the editor pronounces to be certainly the work of Thomas Paine, on the ground of two convincing arguments: 'the one, that the chirography is a *fac-simile* of Mr. P.'s; the other, that the style of composition is peculiarly his own—and that is acknowledged to be almost inimitable.' The first of these arguments we must take for granted on the editor's word, as no specimen is given either of the original 'chirography' or of its imitation: as regards the second, we are quite ready to admit that in the prominent features of the composition, 'Tom the second reigns like Tom the first.' For ignorance, coarseness, and blasphemy, the work is quite worthy of its reputed parent; but unhappily these qualities are anything but inimitable. Tom has not improved in writing English since he left the earth; witness his attempt to advertise the revelations of Andrew Jackson Davis, 'of whose philosophy,' he says, 'allow me now to speak in *commendable terms*,—meaning, we suppose, terms of commendation. Nor yet has he advanced in scientific knowledge; witness his account of the development of man, 'as the highest physical ultimate of matter . . . having come up by regular stages of gradation from the monad' (surely either Tom Darwinizes or Darwin Tomizes) . . . 'the fish running into

into the saurian, the saurian into the bird, the bird into the marsupial, the marsupial into the mammalian, the mammalian into the human'—from which we learn two things: first, philologically, that the proper name of the class is *mammalia*; secondly, physiologically, that marsupials are not mammals. Nor yet has Tom advanced in Biblical learning; for he tells us that 'according to Scripture' Noah's ark contained, among other animals, 'two mammoths,' 'two whales,' 'two sea-serpents,' and 'two sharks.' The main feature of his theology consists in the assertion that God is not a person, but 'an innate quality of and principle in matter.' His remarks on Christian doctrines are too blasphemous to quote.

Such are a few specimens of the revelations proclaimed in America by 'Writing Mediums.' The manner in which these revelations are produced is thus lucidly explained by one of the inspiring spirits, to wit, the above Thomas Paine: 'Aromal electricity is thrown into the system of the medium, and concentrated in the arm in quantities sufficiently large, and in currents sufficiently rapid, as to check the power of the *animal* electricity of the brain. Hence, so long as these currents are continued by us, accompanied by *passiveness* in the medium, we are able to use the arm of the medium, and leave his mind as free to think as ever.' The explanation and the development of the system are doubtless due to our Transatlantic kinsmen; but we insist that the germ of the theory is of genuine British birth. The original idea is manifestly the property of Bayes in the 'Rehearsal,' who tells us that his best song was made by Tom Thimble's first wife after she was dead, and that he himself is 'clara-voyant.'

If one may not laugh at fooleries like these, it is difficult to imagine for what purpose a sense of the ludicrous was given to man. Yet, 'even in laughter the heart is sorrowful,' and Heraclitus, no less than Democritus, might moralise in his own vein over such a spectacle. That these so-called spiritual communications should be established as a regular and periodical phenomenon in the literature of a civilized people, as a fountain to send forth at the same place sweet water and bitter, the vehicle, now of religious instruction, and now of the wildest and most insane falsehood and blasphemy; that its pretensions in both characters alike should be eagerly proclaimed and indiscriminately received by a large population of impostors or dupes, seeking at all hazards for signs and wonders, be they from God or be they from Satan—such things, while we cannot but laugh at their folly, make us weep and blush for the weakness of our nature which makes such folly possible. The case,

case, both in its ludicrous and in its painful aspect, has been rather understated than overstated. We have drawn our examples, in a great measure, from the better specimens of the literature and from the more respectable witnesses: our worst instance belongs to a class in which worse follies remain behind.

What conclusion are we to draw from these phenomena as a whole? If our materials were of a more uniform character, whether for good or for evil, we should have less difficulty in forming an opinion about them. As it is, we are embarrassed by the multitude of our riches. The spirit theory has now assumed a completeness and rotundity which enables it to meet all objections and defy all discrimination. There are, as is now maintained by its defenders, Pagan and Pantheistic, as well as Christian spirits; foolish and lying, as well as wise and truthful spirits. Thus no amount of falsehood or folly in the communication can be urged as an objection; for these may naturally be expected from spirits of a cognate character. But here the sceptic interposes with a new difficulty: 'By your own showing,' he says, 'I am justified in rejecting all such communications without further inquiry. For if the spirits tell me nothing but what I knew before or can find out for myself, their teaching is superfluous: if, on the other hand, they tell me things that I cannot discover for myself, I have no ground on which to believe them; for, by your own admission, it is at least an even chance whether the communicating spirit is one of the wise and truthful, or one of the silly and lying order. Indeed, by the latest evidence, the latter seem to be in a majority.'

It is scarcely possible to go far into the multifarious contents of American 'spiritualist' literature, without coming to the conclusion that, even admitting the possibility of a certain portion of truth at the foundation, an enormous mass of fraud and delusion has been employed in the superstructure. Some of the asserted facts are such as it seems hardly possible to attribute to anything but wilful imposture or mad fanaticism. Others might, perhaps, furnish materials for a new chapter in psychology, illustrating the influence, in certain abnormal states, of mind over matter, in relation, not merely to the phenomena of the senses, but also to the actions usually dependent upon the will. The communications made by 'writing mediums' bear a remarkable resemblance to the power of mechanical writing exhibited by some of Mr. Braid's 'hypnotised' patients; \* both actions being apparently severed from all connexion with the will of the

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\* See Carpenter's 'Human Physiology,' p. 860, (4th edit.)



agent, and from all consciousness of what is being written. This uniformity of mental state, under great varieties of bodily condition and external circumstances, seems to indicate the action of some common mental law, of which the bodily antecedents and concomitants are as yet but imperfectly known. The same law may, perhaps, be traced in table-turning, if, in accordance with Mr. Faraday's explanation, we refer the effect produced to a partially involuntary and unconscious exertion of muscular power.

But when we have deducted from these phenomena everything that can be attributed to fraud or self-delusion, and everything that can be traced to known or presumable natural laws, material or mental, may there not still remain a residue of well-authenticated facts which defy explanation on any natural grounds? We are far from denying that this may be the case; but to ascertain the existence, the amount, and the value of this residue, to sift the wheat of spiritualism—if wheat there be—from the chaff, of which there certainly is a great deal, requires a far more careful investigation and a far more discriminating judgment than is possessed by most of the writers who have hitherto come forward as the exponents of the supernatural hypothesis. Little help can be expected from the shark-like deglutition and ostrich-like digestion of such witnesses as Mr. Howitt and Governor Tallmadge. While admitting, in the language of Johnson, that some belief in apparitions of the dead may be supported by 'the concurrent and unvaried testimony of all ages and of all nations,' we see a marked difference between the venerable and general belief or superstition of past ages, and the got-up exhibitions of the present day; and this difference compels us to regard the latter as a distinct class of phenomena, of mushroom growth and upstart pretensions, whose claims to reception must be founded entirely on their own merits, and not on their very questionable descent from an ancient and respected ancestry. And without denying that they may possess some substantial merit which further inquiry may elicit, we recognise in their present assumptions too much of the characteristic brag and bluster of the country to which they belong, to accept the estimate of their worth on their own valuation.

We are free to confess that we entertain in secret a sneaking kindness for 'that last lingering fiction of the brain, the church-yard ghost,' and regard his gradual extinction with the same feelings with which we grieve over the approaching end of the last scion of an ancient and honoured family. But towards our modern hobgoblins, who perform their fantastic tricks under Mr. Home's tables, we find it difficult to entertain the same

feeling. Our judgment concerning them more nearly approaches to that recorded in an old anecdote narrated by Bacon; not Dr. Dexter's Bacon in the spirit, but Queen Elizabeth's and King James's Bacon in the flesh.

'Sir Edward Dyer, a grave and wise gentleman, did much believe in Kelly the alchemist, that he did indeed the work, and made gold; insomuch that he went into Germany, where Kelly then was, to inform himself fully thereof. After his return, he dined with my Lord of Canterbury, where at that time was at the table Dr. Brown, the physician. They fell in talk of Kelly. Sir Edward Dyer, turning to the Archbishop, said, "I do assure your Grace that that I shall tell you is truth: I am an eyewitness thereof; and if I had not seen it I should not have believed it. I saw Master Kelly put of the base metal into the crucible; and after it was set a little upon the fire, and a very small quantity of the medicine put in, and stirred with a stick of wood, it came forth in great proportion, perfect gold; to the touch, to the hammer, to the test." My Lord Archbishop said, "You had need take heed what you say, Sir Edward Dyer, for here is an infidel at the board." Sir Edward Dyer said again, pleasantly, "I would have looked for an infidel sooner in any place than at your Grace's table." "What say you, Dr. Brown?" saith the Archbishop. Dr. Brown answered, after his blunt and huddling manner, "The gentleman hath spoken enough for me." "Why," saith the Bishop; "what hath he said?" "Marry," saith Dr. Brown, "he said he would not have believed it except he had seen it, and no more will I."'

ART. VII.—1. *English Forests and Forest Trees; Historical, Legendary, and Descriptive.* London, 1853.

2. *Flores Ecclesiæ; the Saints of the Catholic Church arranged according to the Calendar, with the Flowers dedicated to them.* London, 1849.

3. *The Church's Floral Calendar.* London, 1862.

4. *Deutsche Mythologie.* Von Jacob Grimm. Göttingen.

'IT was never a merry world,' said the learned Selden, 'since the fairies left off dancing, and the parsons left off conjuring.' What amount of merriness might return to us if the parsons could be persuaded to resume their conjuring caps, we can hardly foresee; but we are sure there are a thousand good reasons for regretting the fairies. To say nothing of such substantial comforters as fairy aunts and godmothers—who are but distant cousins  
of

of the true small people—how much poetry has left the world since Oberon and Titania

‘Danced full oft in many a grene mead,’

and the cowslips were the pensioners of the fairy queen! In those days there was scarcely a flower in wood or on river bank but had its mysterious connexion with the elfin world, or with a spirit land yet more antique and shadowy; hardly a tree in the greenwood—from the great oak of Thor to the elder with its white blossoms glimmering through the shade—but had its wild legends, its marvellous properties, and sometimes its special ghostly protector. Nowadays, though the flowers are as bright, and the greenwood, though scarcely as wide-spreading, yet as pleasant and as varied as ever, the elf is but rarely seen under the blossoms, and even the memory and the honours of Boscobel are fading away from the Royal Oak. The belief, which in those old days gave life to moorland and forest, has disappeared with Oberon and Titania. Yet, ‘mansit odor.’ Like Aubrey’s Cirencester ghost, the small people have not vanished from middle earth without leaving a ‘curious perfume’ behind them; and it is still possible to trace their ancient presence, not only by the dark rings on the sward, but by the mark set by them on many a plant and flower, sometimes in the names which still cling to them, and sometimes in the shape of lingering folk-lore and tradition. In this way

‘The flower-inwoven mantle of the earth’

has become a sort of palimpsest—an illuminated page on which the signs of many different ages lie half-concealed, one above another. Underneath the characters of the fairies lie those of the great old Northern deities—Woden, and Thor, and Freyja; and deeper still, those of the more ancient world into which they intruded—the world of Pæon, the physician of Olympus, who bestowed his name on the peony; and of Helen of Troy, whose virtues, if not her beauty, are commemorated in the helenium or elecampane, ‘of which herbe,’ says old Gerarde, ‘she had her hands full when she was carried off.’ The decyphering of these overlying characters, if not always an easy, is for the most part a pleasant task; and one that leads us to some of the most famous of the world’s centres, and into many of its most lovely nooks and corners. We propose wandering for a short time among these pleasant places, necessarily somewhat at random; since to trace the associations which crowd about the subject in due order, or at any length, would demand volumes instead of pages.

For the origin of the mysterious reverence with which certain

trees and flowers were anciently regarded, and of 'tree-worship,' properly so called, we must go back to that primæval period into which comparative mythology has of late afforded us such remarkable glimpses; when the earth, to its early inhabitants, seemed not only 'apparelled in celestial light,' but when every part of creation seemed to be endowed with a strange and conscious vitality. When rocks and mountains, the most apparently lifeless and unchanging of the world's features, were thus regarded and were personified in common language, it would have been wonderful if its more lifelike—the great rivers that fertilised it, and the trees, with their changing growth and waving branches, that clothed it—should have been disregarded and unhonoured. Accordingly, sacred rivers and sacred trees appear in the very earliest mythologies which have been recovered, and linger among the last vestiges of heathenism, long after the advent of a purer creed. Either as direct objects of worship, or as forming the temple under whose solemn shadow other and remoter deities might be adored, there is no part of the world in which trees have not been regarded with especial reverence:—

'In such green palaces the first kings reigned;  
Slept in their shade, and angels entertained.  
With such old counsellors they did advise,  
And by frequenting sacred shades, grew wise.' \*

Paradise itself, says Evelyn, was but a kind of 'nemorous temple or sacred grove,' planted by God himself, and given to man 'tanquam primo sacerdoti;' and he goes on to suggest that the groves which the patriarchs are recorded to have planted in different parts of Palestine, may have been memorials of that first tree-shaded paradise from which Adam was expelled.

How far the religious systems of the great nations of antiquity were affected by the record of the Creation and Fall preserved in the opening chapters of Genesis, it is not perhaps possible to determine. There are certain points of resemblance which are at least remarkable, but which we may assign, if we please, either to independent tradition, or to a natural development from the mythology of the earliest or primæval period. The Trees of Life and of Knowledge are at once suggested by the mysterious sacred tree which appears in the most ancient sculptures and paintings of Egypt and Assyria, and in those of the remoter East. In the symbolism of these nations the sacred tree sometimes figures as a type of the universe, and represents the whole system of created things; but more frequently as a 'tree of life,' by whose fruit the votaries of the gods are nourished with divine strength, and are

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\* Waller.

prepared for the joys of immortality. The most ancient types of this mystical tree of life are the date palm, the fig, and the pine, or cedar. Of these, the earliest of which any representation occurs is the palm—the true date palm of the valley of the Nile and of the great alluvial plain of ancient Babylonia—a tree which is exceeded in size and dignity by many of its congeners, but which is spread over two, at least, of the great centres of ancient civilisation, and which, besides its great importance as a food-producer, has a special beauty of its own when the clusters of dates are hanging in golden ripeness under its coronal of dark-green leaves. It is figured as a tree of life on an Egyptian sepulchral tablet, certainly older than the 15th century B.C., and now preserved in the Museum at Berlin. Two arms issue from the top of the tree, one of which presents a tray of dates to the deceased, who stands in front, whilst the other gives him water, ‘the water of life.’ The arms are those of the goddess Nepte, who appears at full length in other and later representations. In another scene, figured by Rosellini, where several generations of a distinguished family are receiving nourishment from the tree of life, one of the fig trees is the type selected—the *Ficus sycamorus*—the sycamore tree of Scripture. As in the former example, the goddess rises from the top of the tree, with a tray of figs in one hand, and pouring a stream of water from a vase held in the other.\* Another species of fig, the peepul (*Ficus religiosa*), is the sacred tree of India. Under it Vishnu was born; and when Brahma appointed the various monarchs of beasts, of birds, and of plants, all of whom were ‘instruments for the preservation of the world,’ the holy fig tree became the sovereign of the trees. The sacred tree which appears so constantly in Assyrian sculpture is apparently a traditional form of the date palm; but the leaves which terminate its branches are sometimes replaced by cones, either of the pine or cedar, but probably of the former, since one species of *pinus* grows to a great size in the Assyrian highlands, whilst the Deodar—which, from its stately growth and from the reverence paid to it in Northern India, where its name signifies the ‘tree of the gods,’ we are at first inclined to look for—does not extend westward beyond the skirts of the Himalayêh. Similar cones are frequently placed in the hands of Assyrian priests, and it is probably the same fir—at all events the cones are the same—which is introduced in a solemn procession on the basement of the grand colonnade at Persepolis.

For the choice of two of these trees—the palm and the fig—it

\* For these illustrations, and for one or two which follow, we are indebted to a paper by Dr. Barlow on the ‘Tree of Life,’ in the *Journal of Sacred Literature* for October, 1862.

is easy to account. Both rank and have always ranked among the most important food-producers of the East, and it would have been impossible to find more satisfactory types of the mystical tree of life, whose fruit imparted strength and wisdom. 'Honour,' said the Prophet of Islam, 'your paternal aunt, the date-palm; for she was created in paradise, of the same earth from which Adam was made.' 'Adam,' says a later Mohammedan tradition, 'was permitted to bring with him out of paradise three things—the myrtle, which is the chief of sweet-scented flowers in the world; an ear of wheat, the chief of all kinds of food; and dates, the chief of all the fruits of this world.' The dates were mysteriously conveyed to the Hejáz; from them all the date-palms in the world have sprung; and Allah has decreed them all to the true believers, who have conquered all the countries in which they are found.\* With such a legend in proof of the value set on the date-palm, we need hardly suppose it to have been borrowed as a sacred symbol by one country from another, nor trace Egyptian influence in the golden palm-trees of Solomon's temple. Both Jews and Arabs regarded the tree as eminently mysterious, and as possessing several properties that rendered it the emblem of a human being. If the head be cut off, it dies; if a branch, another does not grow in its place. Much was to be learnt moreover concerning things both present and future from certain mysterious movements of its leaves on a windless day; and Abraham, say the Rabbins, was well skilled in this 'language of the palms.'† It was from the great maritime plain of Palestine that, 'at least in recent times, came the branches which distinguished the pilgrims of Palestine from those of Rome, Compostella, and Canterbury, by the name of Palmer.'‡ Its very rarity, however, in the hill-country, must have given a value and interest to the palm, wherever it was found there. It is one of the Scriptural types of a righteous man; and it has been suggested that there is a reference to the palm—which was popularly believed to put forth a shoot every month, and hence to become, at the close of the year, a symbol of it—in St. John's description of the Tree of Life in the midst of the Heavenly Jerusalem, 'which bare twelve manner of fruits, and yielded her fruit every month.'§ Such an allusion, indeed, appears to have been recognised at a very early period; and the Tree of Life is represented by a date-palm on some of the earliest mosaics which line the apses of Roman basilicas. It thus appears in the church of SS. Cosmas and Damian (circa A.D. 586), with

\* *Ea-Suyootee*; quoted by Lane.

† Stanley; *Sinai and Palestine*, p. 145.

† *Celsius*; *Hierobotanicon*, ii. 449.

§ *Rev.* xxii. 2.

the phoenix, a most ancient type of our Lord, on its summit. In the famous mosaic in the oratory adjoining S. Giovanni Laterano (circa 642), the palm, with the Almighty Father and the Son on either side of it, rises from the centre of an enclosure, guarded by an angel with a drawn sword. Thus the palm-branch of the Christian martyr was not only an emblem of victory, adopted from the well-known heathen use of it, but typified still more strikingly his connexion with the Tree of Divine Life, 'whose leaves were for the healing of the nations.'

It is not until after the first Crusade that the palm leaf, then brought home in abundance, appears in the churches of Northern Europe under a form which enables us to recognize it with anything like certainty among the sculptured foliage enwreathing their capitals. There is reason to believe, however, that the date palm, under one of its most ancient mystical forms, does appear in many French churches of a much earlier period; and that the sacred tree which figured so constantly on the walls of the vast palaces of Sennacherib and Esarhaddon, is to be recognized, slightly, if at all, changed, among the decorations of churches whose builders little suspected the meaning and the antiquity of the emblem they were adopting. The probable history of its introduction is sufficiently curious. During the early Merovingian period an extensive commercial intercourse was kept up between Gaul and the eastern shores of the Mediterranean. Syrian merchants established themselves in Gaul; and, judging from the manner in which they are mentioned by Gregory of Tours, must, with their followers, have ranked among the most remarkable of the strangely-mixed races which then met and jostled in the streets of the larger Gallic cities. One of these merchants, at least, was a man of sufficient wealth and importance to purchase for himself the bishopric of Paris.\* All of them were Christians; and, among other merchandise, they imported from the East the relics of saints, eagerly sought after by the newly-converted Franks and Burgundians; wine from Gaza and Ascalon, to be used for the holy Eucharist; roots, such as were eaten by the solitaries of the Egyptian deserts,—which formed the only food of certain 'inclusi' (true recluses walled up in lonely towers) whose story is told by Gregory,—and which were also sought after by some of the severer monks; and the rich silken tissues of the East, to be shaped into cope or chasuble for the service of the altar. Some of these vestments

\* Greg. Turon. H. Eccles. ix. 26. On the death of Ragnemodus, Bishop of Paris, Eusebius, quidam negotiator, genere Syrus, datis multis muneribus, in locum ejus subrogatus est. Isque, accepto episcopatu, omnem scholam decessoris sui abjiciens, Syros de genere suo ecclesiasticæ domui ministros statuit.' See also L. vi., ch. 6; and L. vii., ch. 29 and 31.

are still preserved in the sacristies of churches, mainly in the South of France. Their origin is at once evident; and on more than one of them—such is the unchanging spirit of the East—the emblems which figure so largely in Assyrian palaces, and which are seen also on the robes of personages represented on their walls, are reproduced with but slender variation. Among them occurs the sacred tree, with its conventional leaves and flowers. These tissues, it is probable, were woven in the looms of Baghdad or Bussora, where the ancient typical forms may have been longer preserved than elsewhere.\* Their singularity, and their beauty, as set forth by the gold and rich colours of the brocade, seem to have greatly struck the Roman and Franco-Roman artists of Gaul. They copied them in the sculpture of their churches; and according to some of the most eminent French antiquaries, the mystical tree of Assyria between its guardian lions is represented on the tympana of many church portals of various dates, but all of early character.† The form of the tree varies; and the lions are sometimes replaced by dragons or winged monsters. But there is always sufficient resemblance to trace the general design; and it is not perhaps impossible that some of the grotesque carvings on churches built in England during the early Norman period may have had a similar origin. The subject is at least a curious one, and deserves a careful examination at the hands of archæologists.

The third of these most ancient sacred trees—the pine or cedar—is of a different type, and represents a distinct class of ideas. The lightest and most graceful of the fir tribe have a certain character of strength and endurance; and the pines which cover the highlands of Upper Assyria and of Persia, though they nowhere attain to the gigantic dimensions of the Himalayan deodars, must have contrasted strongly with the date-palms and tamarisks that form the principal growth of the alluvial district. The whole tribe, in effect, possesses something of the character which attains its highest developement in those venerable cedars of Lebanon, which are perhaps the most solemnly impressive trees in the world.

The leaves of the date-palm were represented in Europe by the light ‘catkins’ of the willow, still frequently called ‘palms,’ as in the monastic verse—

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\* ‘The Zoroastrian Homa or Sacred Tree was preserved by the Persians, almost as represented on the Assyrian monuments, until the Arab invasion.’—Layard, *Nineveh*, ii. 472.

† For some remarks on this subject, see the ‘*Bulletin Monumental*,’ edited by M. de Caumont, vol. 18, pp. 489-494. Some illustrations are there given, including tympana from the churches of Marigny and of Colleville, both in the Department of Calvados.



'Albescit palmæ coma ; ramus ejus osanna  
Audit, Christicola vociferante viro ;'

but this was a substitution of mediæval times, when some representative of the Eastern tree was required for the churchyard processions of Palm Sunday ; and the golden willow buds offered themselves at precisely the right season. It is possible that the cedar had its Western representative at a much earlier period. Many of its characteristics—its dignity, especially, and its strength—are, among the trees of Europe, most conspicuous in the oak. It is true, indeed, that at the very remote period, certainly more than 4000 years ago, when the first bands of Aryan wanderers reached the shores of Europe, much of the soil of this continent was covered with forests composed exclusively of fir-trees, which were replaced, first by a vegetation of oaks, and afterwards by one of beech trees. The occurrence of such a series of changes in Denmark has been proved by Sir Charles Lyell, in his recent volume, and is remarkably borne out by certain changes of signification in the most ancient Aryan names for the fir and the oak.\* The pine forests of that primæval period may well have been solemn and gigantic, worthy fosterers of the religion and the imagination that were bursting into life beneath their roof of shade. But if they were the earliest Western representatives of the king of trees, the attributes which were first assigned to them passed afterwards to the oak, and finally rested there. It is the oak which, like the cedar in the East, is the representative of supernatural strength and power. 'Quercus Jovi placuit.' Everywhere the oak—which, like the cedar, attracts the lightning, and is frequently splintered by it—is the tree of the Thunder God. The oaks of Zeus belted his oracle at Dodona. In the North, the oak was under the special protection of Donar or Thor, the hammer-wielding God whose name is still retained in the word 'thunder.' With the exception, perhaps, of the ash, there is no European tree which can at all compete with the oak either in the extent of veneration which has been assigned to it, or in the dignity of its ancient traditions. Between the oak and the ash, indeed,—both 'patricians' of the greenwood,—

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\* 'The Anglo-Saxon *furh* means fir, and so does the German *föhre*. But the same word, as fixed in Latin, namely *quercus* (changed in analogy to *fœe* and *quingus*), means oak, and so does the old word *fereha*, which occurs in the Laws of Rothar. . . . The Aryan tribes, all speaking dialects of the same language, who came to settle in Europe during the Fir period,—a period nearly coinciding with the Stone age,—would naturally have known the fir tree only, and applied to it the word which in Anglo-Saxon is pronounced as *furh*, in German as *föhre*. The Romans settling in Europe during the Oak period would apply the same word to the oak.' Report of Professor Max Müller's Fifth Lecture on the Science of Language, in the 'Saturday Review,' April 25, 1863.

a species of rivalry for the pre-eminence has been maintained from a very early period to the present, when, if more serious omens are no longer afforded by them, it is still possible, say the learned in weather signs, to predict much from the tree which first unfolds her leaves:—

‘If the oak’s before the ash,  
Then you may expect a splash;  
But if the ash is ‘fore the oak,  
Then you must beware a soak.’

The oak, however, may fairly claim precedence here, not only as having been the great tree of Britain in its earliest days, but as affording in its own old age a more venerable image of antiquity than any one of its forest brethren. There is, perhaps, nothing in the world—not even the ‘worm-eaten’ castle hold under whose walls it may stand—that more completely carries back the mind to long past ages than such an oak tree, gnarled, shattered, and storm-beaten; the sward about its roots strewn with hoary fragments, brought down by strong winds and wintry snows; yet still wearing its crown of green leaves, and still, year after year, dropping its acorns among the fern at its feet. Such are the grand old oaks of Cadzow Forest,—

‘Whose limbs a thousand years have worn,’

relics of the forest under the shade of whose melancholy boughs, says the tradition, Merlin dwelt and prophesied. Wandering at dusk among the tower-like trunks of these trees, that are scattered irregularly over a space of level ground, surrounded on all sides by the deeper wood, from which the white oxen occasionally emerge into the twilight, it is the present, far more than the past, that becomes dim and spectral; and if the ancient Merlin, with his grey beard and his enchanter’s staff, were on such an occasion to present himself, we should scarcely feel more than the very gentlest ‘shock of mild surprise.’ Still more suggestive than the oaks of Cadzow—though no doubt owing to their very peculiar character, and to their far wilder situation—are those of Wistman’s Wood, on Dartmoor, where, according to the saying of the moormen, you may see ‘a thousand oaks a thousand feet high.’ The marvel is explained by the size of the trees, which, it is said, do not average more than a single foot in height. But the wood is singular enough without this exaggeration. It hangs on the side of a steep hill above the valley of the West Dart, covered, like most of the Dartmoor hill sides, with a wild ruin of granite blocks and fragments, between which the trees have found their scanty nourishment. It is partly owing to this want of soil, and still more, perhaps, to the mountainous character of the district, that

that not one of the trees exceeds the height of a tall man. Yet all display the most striking indications of very great age. Their limbs, knotted and contorted into the most fantastic shapes, spread themselves above and between the blocks of granite, many of which rise higher than the trees. The boughs are thickly clothed with dark green and grey mosses, that hang in long beard-like tangles, and add not a little to the weird look of the strange old wood, which it is difficult to visit, even at mid-day, without a certain 'eerie' feeling. Its real age is unknown; but it is mentioned in documents relating to Dartmoor which date soon after the Conquest; and more than eight hundred concentric rings have been counted in a section from the trunk of one of the larger trees. Wistman's Wood has no traditions of Merlin; but its name takes us back to a personage yet more mysterious—Woden, the 'Lord of the Waste and the Mountain.' 'Wisc,' or 'wish,' was, according to Mr. Kemble, one of the many titles of the great Saxon deity, and the name is retained in the Devonshire term 'whishtness,' used to signify all unearthly creatures and their doings. The spectral pack which hunts over Dartmoor is called the 'wish-hounds,' and the black 'master' who follows the chase is, no doubt, the same who has left his mark on Wistman's Wood.

We are here not carried beyond the traditions of our English ancestors; but there is no reason why the oaks of Dartmoor should not—some, perhaps, even of those which now exist—have been venerated in earlier days, when the Britons, who have left their traces on almost every hill-side, were undisputed masters of the district. One of the very few certainties about the Druids is their reverence for the oak, and for the mistletoe which grew on it; and a more remarkable group of their sacred trees than they may have found at Wistman's Wood can hardly be imagined. The mistletoe, it is true, no longer grows on them; but it is not in Devonshire only that the mistletoe has deserted the oak. It is now found so rarely on that tree as to have led to the suggestion that we must look for the true mistletoe of the Druids, not in the *Viscum album* of our own woods and orchards, but in the *Loranthus Europeus*, an allied parasite, which is frequently found growing on oaks in the South of Europe. The sprays of the *Loranthus* are longer and its leaves wider than those of our own species, and it is therefore more conspicuous. But although we may allow that the golden bough—

'Aureus et foliis et lento vimine ramus  
Junoni infernæ dictus sacer . . . . .'

the 'venerabile donum' which admitted Æneas to the wonders  
of

of the under-world, may have been a tuft of *Loranthus*, the 'Marentakken' or 'branch of spectres,' which still in Holstein is believed to confer the powers of ghost-seeing on its possessor, is unquestionably the true *Viscum*—the same which hangs in such thick clusters, and so appropriately, in all the orchards about Glastonbury—that famous Isle of Avalon, which was very possibly a stronghold of Druidism, and which, according to the ancient tradition, contained the tomb of the great British hero King Arthur. There is no proof that the *Loranthus* ever grew farther north than at present; and, on the other hand, the mistletoe figures in the traditions of the Northern nations as well as in those of the Celts. It was a branch of mistletoe which killed Baldur, the 'whitest' and best of the Gods, after Freyja had taken an oath of all created things that they would never hurt him; except 'one little shoot that groweth east of Valhall, so small and feeble that she forgot to take its oath.' But the mistletoe, thus forgotten, was put by Loke the destroyer into the hand of the blind Hodr, who flung it at Baldur when all the gods were amusing themselves by pelting him with the various creatures which had sworn to Freyja; and Baldur fell dead, pierced by the 'feeble' branch. More than one sword of a Northern champion was named 'Mistilteinn,' after the weapon which had slain the white god. The story affords one of many points of resemblance between the mythology of Northern Europe and those of Persia and the farther East. In the Shah Namêh the hero Asfendiar is represented as invulnerable except by a branch from a tree growing on the remotest shore of the ocean. Desthân, his enemy, found it, hardened it with fire, and killed the hero. Both legends possibly refer to the 'death' of the sun; 'perishing in his youthful vigour either at the end of a day, struck by the powers of darkness, or at the end of the sunny season, stung by the thorn of winter.'\*

It seems something like a caprice which has excluded the mistletoe as well from the evergreen decorations of our churches at present, as from their ancient sculpture and carvings. We know of one instance only of its occurrence. Sprays of mistletoe, with leaf and berry, fill the spandrels of one of the very remarkable tombs in Bristol Cathedral, which were probably designed by some artist-monk in the household of the Berkeleys, whose castle and broad lands are among the chief glories of the West Country, in which the mistletoe is now for the most part found. We do not remember to have seen it elsewhere, even lurking among the quaint devices of a 'Miserere;' whilst the oak—every

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\* Max Müller; 'Comparative Mythology,' in *Oxford Essays* for 1866.

portion of which, in the days of Celtic heathenism, was almost as sacred as the mistletoe which grew on it—was one of the principal trees ‘studied’ by mediæval sculptors, when, during the so-called ‘Decorated’ period, they reproduced leaf and flower with such exquisite beauty and fidelity—witness the oak-leaves laid into the panels of the Cantelupe shrine at Hereford, or the twisted sprays of oak, clustered with acorns, which form one of the most graceful corbels in the choir of Exeter Cathedral. Nor was the reverence with which the oak was regarded by any means confined to the Celts. The tree, as we have seen, was dedicated in an especial manner to Thor. St. Boniface, who, in his native Devonshire, must have been well acquainted with the heathen superstitions that were still in full force about the sacred trees and well-springs, waged a sharp war against them during his wanderings in Central Germany. There was a ‘Thor’s oak’ of enormous size in the country of the Hessians, greatly revered by the people, which, following the advice of some of the Christian converts, St. Boniface determined to cut down. Accordingly, ‘*mentis constantiâ confortatus*,’ he began to hew at the gigantic trunk, whilst the ‘heathen folk’ stood round about, prodigal of their curses, but not daring to interfere. The tree had not been half cut through, when, says Willibrord, the biographer of Boniface, who was himself present, a supernatural wind shook the great crown of its branches, and it fell with a mighty crash, divided ‘*quasi superni nutus solatio*’ into four equal parts. The heathens, he continues, recognised the miracle, and most of them were converted on the spot. With the wood of the fallen tree, St. Boniface built an oratory, which he dedicated in honour of St. Peter.\*

The destruction of the great Thor’s oak was by no means an unwise step. The numerous decrees and canons set forth in various councils, and mentioned in different penitentials, as late as the twelfth and thirteenth centuries, against such as practised witchcraft and did heathen ceremonies under great trees and in forests, prove how difficult it was to separate the ancient creed from such living memorials of it. Nor does the case seem to have been greatly improved when, as frequently occurred among the Celts, especially in Ireland and Armorica, the tree was re-appropriated by the great saint of the district. The Irish St. Colman presided over a famous oak-tree, any fragment of which, kept in the mouth, effectually warded off death by hanging—an immunity not to be despised in the land of shillelaghs. When St. Columba’s oak at Kenmare was blown down in a

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\* Life by Willibrord, ch. 8.

storm, no one dared to touch it, or to apply its wood to ordinary purposes, except a certain tanner, who cured his leather with the bark. With the leather he made himself a pair of shoes; but the first time he put them on he was struck with leprosy, and remained a leper all his life.\* The trees of saints might nowhere be profaned with impunity. In the cloister at Vretou, in Brittany, was a yew-tree which had sprung from the staff of St. Martin—not the great saint of Tours, but the first abbot of the Armorican monastery. Under its shadow the Breton princes always prayed before entering the church. No one dared to touch a leaf, and even the birds treated the sweet, scarlet berries with respect. Not so a band of Norman pirates, two of whom climbed St. Martin's tree to cut bow-staves from it. Both, of course, fell, and were killed on the spot.†

It is possible that many of the more famous oak-trees yet standing in England may date from the days of, at least, Saxon heathendom, and, like the trees of the Irish saints, may have been reappropriated after the conversion of our ancestors. About some of them ancient superstitions yet linger; and nearly all are boundary-trees, marking the original limit of shire or of manor. Such was the great 'Shire-oak' which stood at the meeting-place of York, Nottingham, and Derby, into which three counties it extended its vast shadow. Wider spreading than the chestnut of the 'Centi Cavalli' on Mount Etna, the branches of the Shire-oak could afford shelter to 230 horsemen. Such, too, is the 'Crouch' oak at Addlestone, in Surrey, under which Wickliffe preached and Queen Elizabeth dined—one of the ancient border-marks of Windsor Forest, whose name, according to Mr. Kemble, refers to the figure of the cross anciently cut upon it. Trees thus marked are constantly referred to as boundaries in Anglo-Saxon charters. The cross withdrew the oak from the dominion of Thor or Odin, and not only afforded help and protection to human beings, but even to some tribes of the elfin world. Such, at least, was the belief in the old land of the Teutons. As a peasant named Hans Krepel was one day at work on a heath near Salzburg, a 'little wild or moss-wifekin' appeared to him at noontide, and begged that when he left his labour he would cut three crosses on the last tree he felled. He forgot to do so. The next day she appeared again, saying, 'Ah, my man, why did you not cut the three crosses yesterday? it would have been of use to me and to you. In the evening, and at night, we are often hunted by the wild huntsmen, and are obliged to allow

\* Magnus O'Donnell, *Life of St. Columba*, ap. Colgan, A. S. Hibern. ii.

† Vita S. Martini, ap. Mabillon, *Acta S.S. Ord. Bened.* i. p. 371.

them to worry us, unless we can reach a tree with a cross on it. From thence they have no power to move us.' The man answered churlishly, 'Of what use can that be? how can the crosses help you? I shall do no such thing to please you, indeed.' Upon this, the 'wifekin' flew upon him, and squeezed him so hard that he became ill after it; 'though,' says Prætorius, who tells the story, 'he was a stout fellow.'\* In England it was thought that the oaks themselves were mysteriously protected. According to a belief fully maintained by the gossiping Aubrey, and half-endorsed by Evelyn in his 'Sylva'—

'A strange noise proceeds from a falling oak, so loud as to be heard at half a mile distant, as if it were the genius of the oak lamenting.' . . . . . 'It has not been unusually observed,' continues Aubrey, 'that to cut oakwood is unfortunate. There was at Norwood one oak that had misseltoe, a timber tree, which was felled about 1657. Some persons cut this misseltoe for some apothecaries in London, and sold them a quantity for ten shillings each time, and left only one branch remaining for more to sprout out. One fell lame shortly after; soon after, each of the others lost an eye; and he that felled the tree, though warned of these misfortunes of the other men, would, notwithstanding, adventure to do it, and shortly after broke his leg; as if the Hamadryades had resolved to take an ample revenge for the injury done to their sacred and venerable oak. I cannot omit here taking notice of the great misfortunes in the family of the Earl of Winchelsea, who, at Eastwell, in Kent, felled down a most curious grove of oaks, near his own noble seat, and gave the first blow with his own hands. Shortly after, his Countess died in her bed suddenly; and his eldest son, the Lord Maidstone, was killed at sea by a cannon-bullet.' †

Various omens were afforded by the oak; the change of its leaves from their usual colour gave more than once, says Evelyn, 'fatal premonition' of coming misfortunes during the great civil war. It was the 'suiacheantas' or 'badge' of the Stuarts, and the Highlanders looked upon its not being an evergreen as an omen of the fate of the Royal house. Yet the oak was a thoroughbred Cavalier, as befitted the king of the forest—

'Wherein the younger Charles abode  
Till all the paths were dim,  
And far below the Roundhead rode,  
And hummed a surly hymn.'

No oak-cutter's misfortunes will, it is to be hoped, fall upon us, because the 29th of May now celebrates with such curtailed ceremony that 'sacred oak,' which, says Evelyn, in the dedication

\* Prætorius, *Anthropodemus Plutonicus*; Magdeburg, 1666: quoted in Price's Preface to Warton, p. 38. See also Grimm, *D. Mythol.*, p. 881.

† Aubrey's *History of Surrey*.

of his 'Sylva' to King Charles, 'you, our Θεός ὑλιακός—Nemo-  
rensis Rex—once consecrated with your presence, making it your  
temple and court too.'

Thus the stroke of St. Boniface's axe, although it overthrew  
Thor and sent the parting genius with sighing from his tree,  
could not altogether destroy the recollections and superstitions of  
the ancient creed. Still less have they faded from the other great  
sacred tree of Northern Europe, the ash. As with the oak, there  
are traces of an ancient reverence for the ash among Celts as well  
as Teutons. But the tree is more especially the property of the  
Scandinavian races. With them the great ash tree, Yggdrasil,  
represented the universe. It was the tree of the world, which  
rose, evergreen, and all glittering with dew above the hall of the  
triple Norns—Urdr, Verdandr, and Skuldr—the past, present,  
and future. Under its three roots were the cold land of Hela, the  
place of torture; the land of the Hrim-thyrs, or frost giants; and  
middle earth, the land of mortal men. An eagle, 'far-seeing and  
much kenning,' with a hawk perched between his eyes, sits on  
the top of the tree; and Ratatosk, the squirrel, runs up and down  
the branches, carrying the words of the eagle to Nidhoegg, the  
worm of the abyss, who lies coiled at the foot. The Norns daily  
pour water over the tree from their mysterious well, and under  
its shadow the gods sit 'to give dooms.' It is the 'noble' tree—  
the 'central,' the 'ancient' tree—highest and best of all trees;  
yet in spite of all its honours the ash 'drees a heavier wierd'  
than men weet of. Four stags are for ever biting at its highest  
shoots. In its side it is decaying; and more serpents than it is  
possible to number spread venom through the fibres of its roots.  
Under it is hidden the horn Giallr, with which Heimdallr, the  
warder of the gods, shall rouse the world at the last great conflict.  
At its sound

'Groans the old tree,  
And Loke is loosed;  
Shudders Yggdrasil,  
The great standing ash.'\*

The fire of Surtr will burn the tree at the end; but it will be  
renewed again, fair and green, and the gods will once more con-  
gregate under its branches.

Explanations of this piece of Northern mythology have been  
attempted at great length, and a wonderful amount of learning  
has been poured out on the subject. The eagle has been thought  
to represent heaven, or the air, and Ratatosk, the squirrel, the  
vapours that float perpetually over the surface of the earth.† But

\* Volo-Spa, str. xliii.

† Finn Magnussen, *Lexicon Mythol.*, s. v. Yggdrasil. See also his 'Eddalæren,'  
whilst



whilst it is sufficiently clear that the tree is a symbol of the universe, its various accompaniments are by no means easy of interpretation. In the whole, the doomed character of the Northern religion—reflecting the sombre skies and the deep gloomy forests under which it was born and nurtured—is strongly apparent. The tree suffers innumerable evils: the whole creation ‘groans together’ until its final renovation, after the ‘twilight of the gods’ and the great fire of Surtr. Yggdrasil (the etymology is so obscure that we will not attempt to explain it) suggests in effect far higher realities than it was meant to symbolise; and we can with difficulty escape the conviction that some of its imagery may have been borrowed from the stores of the remoter East.

It can hardly have been the mere beauty of the ash which induced our Scandinavian forefathers to adopt it as their mysterious world-tree, graceful and striking as it is, standing sentinel on the outskirts of the wood, or overhanging some broken river-bank, the dark lines of its curved branches traced here and there between its masses of floating leafage. But the range of the ash extends farther north than that of the oak. It is the chief timber-tree of the forests beyond the Baltic, and its wood was used for many purposes for which the pines and firs of the North were not available. The long spear shafts and axe-handles of the heroes of the Sagas were made of ash-wood. Their ships also were not unfrequently built of ash; and it may be either for this reason that Adam of Bremen gives the name of ‘ashmen’ to the Vikings of Norway and Denmark, or because, as the prose Edda asserts, the three sons of the giant, of whom Odin was the eldest, made the first man from a block of ash timber which they found on the sea-shore. The ash, too, like the sycamore, to which Sir Walter has somewhere compared the sturdy endurance of the Scottish character, will grow on higher ground than most other trees, and in such situations affords in itself no bad image of a hardy Northern ‘ashman.’ Its sprays of foliage are there thinner and more curved, and its moss-covered trunk is knotted and twisted, as though it had encountered fierce obstacles in its rising, and had put forth all its strength in the struggle. It was partly from this power of battling with ‘winter and rough weather,’ and partly perhaps from the mysterious feeling with which the old Saxon regarded it, that the ash so often appears as the ‘household tree’ of outlying thorpes and granges. Many an ancient standing on the borders of the Devonshire moors, or on the high grounds of Hampshire—the strongholds of Saxon tradition—is thus marked by a group of knotted ash-trees.

Some such reasons as these may have led to the adoption of the ash as the great sacred tree of the North. Yet it is not easy

to pluck out the heart of its mystery; and the descriptions of certain ancient representatives of Yggdrasil do not lessen the difficulty. The great world-tree under which the gods assembled was, says the Edda, although an ash, an evergreen; and scattered over Northern Europe were many sacred trees, revered as representing Yggdrasil, which are said to have been green summer and winter. Such a tree, according to the Archbishop of Bremen, stood close to the great temple at Upsal; and there was a famous tree of the same kind in Dithmarsch, carefully protected by an entrenchment, and looked upon as bound up in some mysterious way with the fortunes of the country. When Dithmarsch lost her ancient liberty, the tree withered; but a magpie, one of the chief Northern birds of augury, came and built on it, and her eggs produced five young ones, perfectly white—an omen that liberty should one day return. These trees may have been either solitary specimens of the *Ilex*, or more probably of the Turkey oak (*Q. cerris*), the chief oak of Southern Europe—a tree which holds on its leaves so long, that in the North it might well pass for an evergreen. A still more famous tree, described as an evergreen—that at Romowe, the old sacred centre of the Prussians—was certainly an oak.

It is somewhat remarkable, considering that the roots of Yggdrasil were half destroyed by the serpents that lay nestled among them, to find the leaves and wood of the ash regarded throughout Northern Europe as a powerful protection from all manner of snakes and 'evil worms.' Among the curious woodcuts which adorn the Roman edition of Olaus Magnus, that illustrating his chapter 'touching the keeping away of serpents from children in harvest time' represents the children comfortably slung in their cradles from the branches of great ash-trees, whilst their mothers are hard at work in the harvest-field below. Snakes, according to the gossiping old Swede, cannot abide the ash, and will not willingly go near it. If a circle be traced with an ashen staff, says a piece of Devonshire folk-lore, round a sleeping viper, the creature will be unable to pass beyond it. In such folk-lore as this, or in the 'shrew-ash' described in White's *Seiborne*, it may not be possible to trace Yggdrasil: but Northern antiquaries insist that the world-tree has had, and has, its direct representatives. They find it, first in the maypole, with its garlands, its streaming ribbons, and its bird's-eggs, now almost as completely a relic of past ages as Yggdrasil itself; and also in the Christmas Tree, which, according to the learned Finn Magnussen, is descended in a straight line from the great ash, of all whose accompaniments—the stag, the eagle, and the squirrel—the ornaments which hang from the branches of the modern

modern tree are memorials. Into such weighty questions as these we need not examine: but it is quite certain that the recollections of Yggdrasil did not fade away with the introduction of Christianity; and that they were interwoven in a remarkable manner with some of the mediæval traditions relating to the tree of the cross. Eilif, a Norwegian scald, who, before his conversion, had been a devoted servant of Thor, thus, after he had become a so-called Christian, speaks of Our Lord:—

‘ They say he sitteth on a mount,  
South at the Urdr well;  
So the strong King of Rome’s gods (angels)  
Hath power without bound.’ \*

The Urdr well was that from which the Norns drew water to pour over Yggdrasil; and on a mount under the tree Thor and his brethren sat ‘to give dooms.’ Eilif must have been still more than half a heathen; but his verses show how readily the imagery of the former creed could be adapted after the change to Christianity; and some later mediæval poems, quoted in Grimm’s great work on Teutonic Mythology, prove that the connexion with Yggdrasil, suggested in Eilif’s verses, was long retained. The tree of the cross, says one of these ‘singers,’ is a noble tree, planted in a garden. Its roots pierce downward to hell; its top reaches to heaven; and on its branches, which spread over the world, sit birds that sing without ceasing.† The world-tree of the Ashmen has here become a world-tree with a far deeper significance. It is not clear, however, whether such descriptions as these (which occur also in graver writers‡) were meant to be accepted literally. It is more certain that a remarkable legend, of a different kind, was attached to the actual tree of the cross, and was generally believed throughout the middle ages.

It is unnecessary to discuss in this place the historical truth of the discovery of our Lord’s cross by the Empress Helena, said to have been made in the year 326. The great argument against it is the silence of Eusebius, who died about A.D. 338; but it is at least certain that a cross, said to have been that of our Lord, was publicly shown and honoured in Jerusalem during the episcopate of St. Cyril (350-386). It was after this time, and probably as a natural result of the interest awakened by the asserted discovery,

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\* Finn Magnussen.

† Grimm, *D. Mythol.*, p. 757.

‡ ‘*Nam ipsa crux magnum in se mysterium continet; cujus positio talis est, ut superior pars cælos petat, inferior terræ inhæreat, fixa infernorum ima contingat, latitudo autem ejus partes mundi appellat.*’ From a treatise ‘*De Divinis Officiis*,’ quoted by Grimm, p. 757.

that the legend which told the history of the tree of the cross gradually took shape ; working into itself many older traditions, especially those which had made Hebron and its neighbourhood the chief resting-place of Adam after his expulsion from Paradise. With slight variations the story occurs in all the great mediæval legendaries, including the '*Legenda Aurea*' of Jacques de Voraigne. It was told also in verse, by trouvère and by troubadour ; and formed the subject of many stained windows (it occurs for example in one of those which give an especial interest to the Cornish church of St. Neot), and of much ancient tapestry and wall painting. In its complete shape the legend is as follows.

For four hundred and thirty-two years after his expulsion from Paradise, Adam had tilled the ground in the valley of Hebron, when he felt his end approaching, and determined to send his son Seth to the gates of Paradise, to demand from their keeper, 'the angel called Cherubim,' the oil of mercy which had been promised to Adam when he was driven from the garden. Seth accordingly set forth, finding his way by the footprints of Adam and Eve, upon which no grass had grown since they passed from Paradise to Hebron. The angel, after hearing the message, ordered Seth to look beyond the gate into the garden, and to tell him what he saw. He beheld a place of inexpressible delight and beauty, with the four great rivers proceeding from a fountain in the centre ; and, rising from the edge of the fountain, an enormous tree, with wide-spreading branches, but without either bark or leaves. He was ordered to look a second time, when he saw a serpent twisted round the tree ; and a third time, when the tree had raised itself to heaven, and bore on its summit a child wrapped in glittering vestments. It was this child, said the angel, who would give to Adam the oil of mercy when the due time should come. Meanwhile the angel gave Seth three seeds from the fruit of the tree of which Adam had eaten. These were to be placed in the mouth of Adam before his burial ; and three trees would spring from them,—a cedar, a cypress, and a pine. The trees were symbolical of the Holy Trinity, not only by their number, but by the virtues which belonged to each separately.

It happened as the angel had foretold. The trees were hardly a foot above the ground in the days of Abraham. Moses, to whom their true nature was revealed, took them up carefully, carried them with him during the years of wandering in the desert, and then replanted them in a mysterious valley named Comfrafort ('Comfort,' 'Consolation?'). From Comfrafort, David was directed to bring them to Jerusalem. He planted them close to a fountain ; and within thirty years they had grown together

so as to form a single tree of wonderful beauty, under the shade of which David composed his psalms, and wept for his sins. In spite of its beauty, Solomon cut it down in order to complete his temple; for which a single beam was wanted, of a size such as no other tree could furnish. But, in fitting the beam to its place, it was found, after repeated trials, either too long or too short; and the marvel was accepted as a sign that it was not to be so employed. The miraculous beam, however, was reverently preserved in the temple. A certain woman, named Maximilla, one day leant against it, when her clothes caught fire, and she cried out in a spirit of prophecy, 'Jesus Christ, thou Son of God, help me!' The Jews, when they heard her cry, took her for mad, and chased her from the city—the first martyr, says the legend, for Jesus Christ.

Thus far the more usual version. Another, which has been followed in a striking Provençal narration, quoted by M. Fauriel,\* asserts that when the tree was found too short for the temple, it was flung aside into a certain marsh, where it served as a bridge. But when the Queen of Sheba came to Jerusalem to hear the wisdom of Solomon, and was about to cross the marsh, she saw in a vision how the Saviour of the world was to be suspended on that tree, and so would not walk over it, but forthwith adored it. It was afterwards, as all the versions agree, buried in the earth, on the spot where the Pool of Bethesda was afterwards made; so that it was not only the descent of the angel, but the virtues of the buried wood, which gave its healing qualities to the water. At the time of the Passion the wood rose and floated on the surface. The Jews took it to make the cross of our Lord.

Such is the remarkable legend which has at least the interest of having been very widely spread, and of having been generally received as authentic. It would be no easy task to trace the gradual steps of its formation, or to mark the period of its first introduction to Europe. The footprints of Adam, which left the ground bare, are still pointed out on the summit of Mount Gerizim. There was a very ancient tradition—more ancient apparently than the legend which has just been narrated—which asserted that the cross itself was fixed in the grave of Adam, and that his skull was thrown up in digging the ground to receive it—

'Thou madest Death; and lo, thy foot  
Is on the skull which thou hast made.'

Traditions such as these seem to have been worked into the later legend; and there may have been others relating to Adam pre-

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\* 'Hist. de la Poésie Provençale,' i. 263.

served in the neighbourhood of Hebron. The tree of the story, 'without bark or leaves,' is possibly not unconnected with a remarkable oak, which Sir John Mandeville, in the middle of the fourteenth century, thus describes:—

'And a lytille fro Ebron is the Mount of Mambre, of the which the valley taketh his name. And there is a tree of Oke, that the Sarazines clepen (call) Dirpe, that is of Abraham's tyme, the whiche men clepen the drye tree. And thei seye, that it hathe ben there sithe the beginnyng of the world; and was sumtyme grene, and bare leves, unto the tyme that oure Lord dyede on the cros; and thanne it dryede; and so dyden alle the trees that waren thanne in the worlde. And some saye, be here prophecyes, that a Lord, a prince of the west syde of the world, shalle wyn the land of promysseyoun, that ys the Holy Land, with helpe of Cristene men; and he schalle do synge a masse undir that drye tree, and then the tree schalle wexen grene, and bere bothe fruyt and leves. And through that myracle manye Sarazines and Jewes schulle be turned to Cristene feythe. And therefore thei don gret worschipe thereto, and kepen it fully besyly. And alle be it so, that it be drye, natheles yet he berethe gret vertue: for certeynly he that hath a litille thereof upon him, it heleth him of the fallynge evylle; and his hors schalle not be a foundred; and manye othere vertues it hathe: wherefore men holden it full precyous.\*

This is no doubt the 'antediluvian' oak—*τὴν Ωγγυλὴν καλου μένην δρῖν*—mentioned by Josephus, and especially dedicated to Abraham,† the last relic of the 'oaks' (mistranslated the 'plain' ‡) of Mamre. The tree was said in later times to have sprung from the staff of one of the angels who visited Abraham here; and though sometimes blazing with fire, it nevertheless was always green. Writers who, like Lipsius and Gretser, maintained that the cross of our Lord had been made of oak, appealed to the religious sanctity with which the sacred writers seem occasionally to invest that tree—and especially to this oak of Mamre—as partly confirming their opinion. But the earlier mediæval belief was evidently connected with the legend of the tree which sprang from the three seeds given to Seth; and when four kinds of wood are mentioned, the title on the cross is included:—

'Pes crucis est cedrus; corpus tenet alta cupressus;  
Palma manus retinet; titulo lætatur oliva.'

Bede names cypress, cedar, pine, and box as the four woods; and St. Chrysostom, who names but three, refers to the words of

\* 'Travels of Sir John Mandeville,' ed. Halliwell, pp. 68, 69. Mandeville left England in 1322, and returning to Europe after an absence of 34 years, died at Liège in 1371.

† See Dr. Stanley's 'Lectures on the Jewish Church,' and 'Sermons preached in the East.'

‡ Stanley's 'Sinai and Palestine,' p. 103.

Isaiah, 'The glory of Lebanon shall come unto thee; the fir-tree, the pine-tree, and the box together, to beautify the place of my sanctuary.'\* What the material of our Lord's cross may in truth have been, it is not easy to conjecture; unless we assign any weight to the assertion of Lipsius, that the pieces which were shown in his day as relics were of oak.†

The cross of our blessed Lord may be said to fling its shadow over the whole vegetable world. From this time the trees and the flowers which had been associated with heathen rites and deities, began to be connected with holier names, and not unfrequently with the events of the Crucifixion itself. Thus one species of orchis, which in Cheshire is called 'Gethsemane,' is said to have been growing at the foot of the cross, and to have received some drops of blood on its leaves. Hence the dark stains by which they have ever since been marked; just as 'Jean le gorge-rouge,' as the robin is called in Brittany, is there said to have plucked a thorn from the crown of the Saviour, in the vain attempt to remove it, and to have been marked ever since by its red breast. Some such legend seems also to have been attached to the white, purple-stained flower of the wood-sorrel, which the early Italian painters, Fra Angelico among them, occasionally place in the foreground of their Crucifixions. The triple leaf of this plant—which St. Patrick is said to have used, as he did the shamrock, in illustration of the Trinity—and, as Mr. Ruskin suggests, its peculiar power of quenching thirst, may also have been in the mind of the painters; and the remarkable Italian name of the wood-sorrel—'Alleluia'—may have had its share in its introduction; 'as if the very flowers round the cross were giving glory to God.' There is however one plant which was anciently regarded, at least in northern Europe, as having been more especially connected with the sufferings of our Lord—the aubépine or white-thorn. It is of this that the crown of thorns was generally thought to have been made. We now know that it cannot have been so; but the recollection of the old belief may well give an additional interest to those venerable thorns which are so often found—planted, it may have been, with this especial reference—near the ruins of monastic houses.

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\* Isaiah lx. 13. Chrysostom, 'Orat. de Veneratione Crucis,' quoted by Gretser de Cruce.

† 'E quâ materia crux? ex obvio et prompto aliquo ligno. E quâ nostri servatoris? Censemus e quercu. Primum quia viri fide digni asserunt frusta sacratissimi hujus ligni quæ hodie extant, speciem hanc referre. Tum, quia crebra et frequens in Judæa olim et nunc quoque illa arbor. Tertio, quia robustum lignum, et fixationi laturæque aptum. . . . Nam quod superioris aliquot sævi scriptores tria aut quatuor genera ligni in cruce dominica agnoscunt, curiose magis dictum arbitramur quam vere.'—*Justus Lipsius de Cruce*, l. iii. cap. 13.

The white-thorn is one of the trees most in favour with the small people; and both in Brittany and in some parts of Ireland it is held unsafe to gather even a leaf from certain old and solitary thorns, which grow in sheltered hollows of the moorland, and are the fairies' trysting places. But no 'evil ghost' dares to approach the white-thorn, such are the virtues which it acquired from the use which had been made of it. We may turn once more to Sir John Mandeville for the mediæval belief:—

'Then was our Lord ylad into a gardyn . . . and there the Jewes scorned hym, and maden hym a crowne of the braunches of Albespyne, that is white thorn, that grew in the same gardyn, and setten yt on hys heved. . . . And therefore hath the white thorn many virtues. For he that beareth a braunch on hym thereof, no thondre, ne no maner of tempest may dere (hurt) hym; ne in the hows that yt is ynne may non evil ghost entre. . . . Afterward was our Lord lad forth before the Bischoppes and the maysters of the lawe, to another gardyn of Anne (Annas) . . . and there also he was examined and scorned . . . and crowned eft with a white thorn that men clepeth barbarynes, that grew in that gardyn; and that hath also many virtues. And afterwards he was lad into a gardyn of Cayphas, and there he was crowned with eglantier. . . . And after he was lad into the chambre of Pylate, and there he was crowned . . . and there made thei the crown of Jonkes (rushes) of the see . . . and of this crown half ys in Paris and the other half at Costantynoble: and this crown had Christ on hys heved when he was don upon the cros; and therefore ought men to worschipe it and hold it more worthi than any of the other.\*

The various beliefs respecting the crown of thorns are here curiously combined. That it had been made of white-thorn was the natural creed of northern Europe; and it was the scent of 'aubépine' that filled the air when, according to the romance, the holy crown blossomed afresh, whilst the victorious Charlemagne was kneeling before it. The berberis is the 'holy thorn' of Italy, where it seems to have been so regarded because its thorns are set together in groups of three at each joint of the branch. The prickly rush was one of the Eastern traditions; but the belief of the East has been tolerably constant to what was possibly the real plant used—(although this can only be asserted with much hesitation)—the Nabk (*Zizyphus spina Christi*), a species of buckthorn. This plant is still found in the neighbourhood of Jerusalem, and is identical with the 'atad' of Scripture, translated 'bramble' in the English version. Since the bramble has been thus consecrated, says Gretser, it has, in truth, obtained the kingdom among trees, and the rest 'put their trust in its shadow,' as foretold in the parable of Jotham.† The

\* 'Travels,' p. 70.

† Judges ix.



nabk has large heart-shaped green leaves, and bears a single-stoned fruit, which 'looks and tastes rather like a bad crab-apple.' It is, according to Sir Gardner Wilkinson,\* the *lotos* of Homer, the enchanted fruit of the land

'In which it seemèd always afternoon.'

A sort of wine was made from it by the *lotos*-eaters, the origin, it has been suggested, of the Homeric myth.

The legend frequently assigned to the aspen—that it was used for the cross of Our Lord, and that its leaves have shivered ever since—is, we believe, of no great antiquity, and is rather local than general. The shivering of the leaves is said, in some parts of Germany, to have been a punishment for the great pride of the tree, which refused to bow its head when the Saviour passed through the forests of the North, and all the other trees bent lowly before Him. The story, which is found elsewhere, recalls the miraculous palm of the Gospel of the Infancy, which bent its crown of fruit for the support of the Virgin, who was resting beneath it, and was rewarded by the Divine Infant with the words, 'Lift thee up, O palm, and be thou companion of the trees which are in the paradise of my Father.' Still less general than the legend of the aspen is the belief—which seems, indeed, almost confined to certain of the midland counties—that the cross was made of elder, and that for this reason the wood of the elder-tree should never be bound up in faggots for burning, or be treated with the least disrespect. This is the more remarkable, because the usual mediæval tradition ascribed a very different character to the elder-tree, which had been of evil repute ever since Judas hanged himself upon it. This tree, which *Mandeville* calls a 'tre of eldre,' proving at least thereby the general belief of Western Europe, was shown in his time 'fast by' the tomb of Absalom. It is probable that the piece of English folklore has its roots in the old heathenism of the North, and is not unconnected with a curious superstition about the elder still general in Denmark. On the border of the wood, with its white clusters glimmering through the dusk, the elder has an especially ghostlike and mysterious appearance; and it is held in Denmark that the tree is protected by a powerful being called the Elder-mother, without whose leave it is not safe to gather the flowers. No household furniture must be made of elder-wood, least of all a cradle; for in such a case the Elder-mother will certainly strangle the sleeping child. It has been suggested that a connexion may exist between the Danish name of the elder-tree (*hylde*), and that of the elves (*ellen*). This is uncertain: but

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\* Rawlinson's 'Herodotus,' ii. 127.

Mr. Worsaae would, perhaps, be justified in pointing to the English belief as the Christianized form of a superstition introduced by the first Scandinavian settlers within the Danelagh.

The change, of which this may be an example, and to which we have more than once referred, is illustrated by nothing so completely as by the flowers which have been more especially dedicated to the Blessed Virgin. All flowers, indeed, are said to be dedicated to her;—hence the varied groups which fill Continental churches during her month—the month of May; and hence the wreaths of all kinds and colours with which the Flemish painters especially delighted to encircle their pictures of the Mother and Child. But there are many with which ‘Our Lady’s’ name is, in one form or another, directly connected. To her belong the ‘Lady’s grass,’ the ‘Lady’s slipper,’ and ‘Lady’s smock.’ In some parts of Germany the primrose is ‘Our Lady’s key’ (*Frauenschlüssel*),—because, suggests Grimm, it is this flower that ‘unlocks’ the spring; the grey-green leaf, covered with a soft, silky hair, of the *Alchemilla vulgaris*, is ‘Our Lady’s mantle;’ the glistening drops that sparkle on the sun-dew are ‘Our Lady’s tears;’ and the beautiful ‘Maiden’ hair-fern, that lines the sides of Cornish sea caves with its delicate fronds, is also commemorative of her, and is in some parts of Europe known as ‘Maria’s hair.’ To us, these plants now suggest the Virgin only; but long before the first Christian teachers made their way to the shores of Northern Europe, they had been connected with some great female divinity, whose name is still here and there retained. Thus, one species of *Adiantum* is still known in Iceland as ‘Freyja’s hair;’ and it is for the most part Freyja, the ‘frau’—mother and queen of the Northern gods—who in these and similar cases was replaced by the Virgin. The lady-bird, the German ‘Marienvoglein,’ was once ‘Freyja’s bird;’ and the constellation of Orion’s belt, in Zealand known as ‘Mariärok,’—Mary’s spindle,—is still Freyja’s spindle in Sweden. Although it is not always easy to account for the attributes of mystery or of magical power assigned to the sacred plants of the ancient world, Freyja’s plants are generally marked so distinctly by colour or by peculiar form, as to point out at once the cause of their selection. In some cases the purity of the white flower rendered the change to the patronage of the Virgin specially appropriate: but she seems to have taken the place of the heathen goddess as a matter of course, just as Thor and Odin were replaced in a similar manner by St. John or St. Christopher. The two flowers, however, which beyond all others are connected with the Virgin—the rival queens of the garden, the lily and the rose—had been dedicated

cated to her in the East, whilst Freyja was still presiding undisturbed over her own woods and moorlands; although the same change may be traced in the history and appropriation of both, after the Northern world became Christian.

The lily is first directly connected with the Virgin in the story of her Assumption,—a story which was not generally accepted until the beginning of the fifth century, although it dates apparently from the second. This asserts, that when the Apostles, on the third day after her interment, visited the grave in which they had laid the mother of our Lord, they found it open, and filled with a growth of roses and white lilies. Henceforth these flowers became her especial emblems, in accordance with the text, 'I am the rose of Sharon, and the lily of the valley.' The flower which generally appears in connexion with the Virgin is the great white lily (*Lilium candidum*) of our gardens, the purest and most beautiful of all the species. Singularly enough, the native country of this lily is still a matter of dispute. It is nowhere found wild in Palestine; and it has even been suggested that it may have been an importation from the New World. This, however, as Dr. Lindley some time since pointed out, is certainly not the case; since the true white lily appears in many Italian and Flemish pictures of earlier date than the first voyages of Columbus. It is now cultivated in both Syria and Egypt as an exotic bulb; but it seems probable that it has been known in those countries from a very early period, and that the beauty and purity of its flowers caused it to be regarded with a peculiar reverence long before the Christian æra. It seems to be this lily which was believed by the Jews to counteract all witchcraft and enchantments; for which reason Judith is said to have crowned herself with a wreath of lilies when she set out for the tent of Holofernes. It was, perhaps, introduced to Europe during the Roman period; for it can hardly be any other than the great white lily to which Bede refers as a fit emblem of the resurrection of the Virgin: the pure white petals signifying her spotless body; the golden anthers within, typifying her soul, sparkling with Divine light. In pictures of the Annunciation, the branch of white lilies is not placed in the hand of the archangel Gabriel until the later period of Italian art. The earlier painters represent him with either a sceptre, or, more rarely, with a spray of the olive-tree. But in almost every case the vase of lilies stands by the side of the Virgin, with its three mystical flowers crowning their three green stems. The origin of this mysterious number was, according to the legend, as follows. There was a certain famous Master of the Dominicans, who for many years had been tormented

mented by doubts concerning the mother of our Lord; and at last, knowing that a brother of his Order, named Egidius, was of great renown for sanctity and for divine illumination, he determined to lay his difficulty before him. Brother Egidius, foreknowing both his coming and the object of it, set out to meet the Master; and as he approached, striking the ground with his staff, he exclaimed 'O Master of the Preachers! *Virgo ante partum!*' and immediately, on the spot which he had stricken, there sprang out of the earth a single lily flower, whiter than snow. Again Brother Egidius struck with his staff, saying, 'O doubting Master! *Virgo in partu!*' and a second lily appeared; and again he struck, with the words, 'O my brother! *Virgo post partum!*' and a third lily sprang up to illustrate the miracle and to confirm the faith of the Master.\* The story is appropriately assigned to the Dominicans, who in their origin were so closely connected with the great burst of devotion to the Virgin Mary which characterised the end of the twelfth and the beginning of the thirteenth centuries. It is to this period that most of the English 'Lady chapels' belong, and from this time the lily appears as a striking architectural ornament. The Cistercians, especially, who, not less than the children of St. Domenic, regarded the Virgin as their patroness, adopted this emblem in their churches; and their 'carved work of open lilies' still graces with its mournful beauty the ruined aisles and cloisters of Fountains, of Rievaulx, and of Kirkstall. The Cistercians, indeed, had their own story of the lily. There was a brother of their Order so rude and so unlettered that he could be taught nothing, and could retain nothing in his memory beyond the 'Ave Maria' of the angelical salutation. But this he repeated incessantly. At last he died; and from his grave there sprang up a lily of pure gold, with the words 'Ave Maria' traced on every leaf.

Although it would be impossible to find a more beautiful or striking emblem of the Virgin than the lily, it has a far higher value for us from the fact that it was a flower of this kind to which our Lord referred in the sermon on the Mount. Could we determine with any certainty the exact species on which the glance of our blessed Lord fell when He bade His hearers 'consider the lilies of the field,' there is surely no flower in the world which we should regard with equal interest. But this is not easy. The plains westward of the lake of Genesareth, which surround the 'Mount of Beatitudes,' are covered, at different seasons of the year, with liliaceous flowers of many kinds, nearly all of which are brightly coloured. Pococke saw tulips

\* '*Magnum Speculum Exemplorum*,' quoted by Dr. Rock. '*Church of the Fathers*,' iii. 247.

growing wild in great numbers, and conjectured that they were the 'lilies of Solomon.' Sir J. E. Smith thought the plant was the *Amaryllis lutea*, whose golden flowers cover the fields of the Levant in autumn; but later travellers are disposed to regard the Chalcedonian, or scarlet Martagon lily, as having been that referred to by our Lord. This, which was formerly known as the 'lily of Byzantium,' is found from the Adriatic to the Levant, and is most abundant throughout the district of Galilee, where almost the only plant which disputes the pre-eminence with it is the rhododendron. It is, moreover, in blossom precisely at that season of the year (the early summer) when the sermon on the Mount is generally thought to have been spoken; and its tall pyramids of scarlet flowers brighten the plain with such touches of strong colour as are visible at a great distance, and might fitly suggest a comparison with the royal robes of Solomon. The great gardeners of former days—Benedictine and Cistercian, monk and nun—looked upon the lily of the valley as the true 'flower of the field.' Although it now grows wild in many parts of England, it is not a native, and may have been introduced from Southern Europe by some Brother 'Pacificus,' whom we may picture to ourselves as tending the plant with loving care in the garden of his monastery, and watching reverently for the first unfolding of its blossoms. Like the great white lily, the lily of the valley was especially dedicated to the Virgin, and the folk-lore which surrounds it in England is always connected with purity and holiness. It grows freely in some parts of St. Leonard's Forest in Sussex, and is there said to have sprung from the blood of St. Leonard, who once fought in the forest for three successive days with a mighty worm or 'fire-drake.' Although at last victorious, the saint was severely wounded in the struggle, and wherever his blood fell to the ground lilies of the valley sprang up in profusion.

The rose, it need hardly be said, is as much an emblem of the Virgin as the lily, with which latter flower the 'rose of Sharon' is united in the text already quoted. Yet it is doubtful, not only whether the original word is here rightly translated 'rose,' but whether the rose is mentioned at all in any part of the sacred volume. The oleander and the rhododendron are, no doubt, the true plants in many places where the English translation uses the word rose; and the rose of Sharon is, in all probability, the large, single yellow Narcissus—a flower common in Palestine, and one that has always been highly esteemed in the East. 'He who has two cakes of bread,' Mahomed is reported to have said, 'let him sell one of them for some flowers of the Narcissus; for bread is the food of the body, but narcissus is the food of the soul.'

soul.' Venerable, however, as is the renown of the *Narcissus*—the antique flower-crown of the 'great goddesses'—

μεγάλαιν θεᾶν  
ἀρχαῖον στεφάνωμ'— . . .

we are hardly disposed to recognise it as a rival of the rose, least of all in a country which displays the rose as its emblem. The 'rose of England' can hardly, we believe, trace itself higher than the days of the great wars, which

'Sent, between the red rose and the white,  
A thousand souls to death and deadly night.'

But, ages before the brawl in the Temple Gardens, the flower had been connected with one of the most ancient names of our island. The elder Pliny, in discussing the etymology of the word Albion, suggests that the land may have been so named from the white roses (ob rosas *albas*) which abounded in it.\* Whatever we may think of the etymological skill displayed in the suggestion, the words call up a picture of the great Roman encyclopædist in earnest talk with some master of legions newly returned from Britain—it may be, with Vespasian himself—and plying him with eager questions about the woods of the remote province, under whose branches his troops had so often rested. We look with almost a new pleasure on the roses of our own hedgerows, when regarding them as descended in a straight line from the 'rosas albas' of those far-off summers.

The northern portal of the cathedral at Upsal is covered with sculptured roses, which Scheffer, the historian of the place, thought were intended as a recognition of the fact that the first preachers of Christianity in the North had come from England.† But he need hardly have gone so far afield. The rose has always been an ecclesiastical emblem, and in heathen days it was a mystic flower in both Germany and Scandinavia. The apse of the venerable cathedral of Hildesheim is nearly covered by a wild rose, the roots of which are within the crypt. It was, says the tradition, growing on the spot before the foundations of the church were laid by Charlemagne; and it lays claim, accordingly, to an antiquity of more than a thousand years. We are, perhaps, fairly entitled to conclude that the present tree is the representative of a long line of ancestors which may have flourished here before the days of St. Boniface, and have marked Hildesheim as a sacred site to be Christianized by the erection of a church. For the rose was under the special protection of dwarfs and elves, who

\* 'Albion insula sic dicta ab albis rupibus quas mare alluit, vel ob rosas albas quibus abundat.'—*Hist. Nat.*, iv. 16.

† Scheffer, '*Upsalia Antiqua*,' p. 173.

were ruled—so the Heldenbuch tells us—by their mighty king Laurin, the lord of the Rose Garden :—

‘Four portals to the garden lead, and when the gates are closed  
No living wight dare touch a rose, ‘gainst his strict command  
opposed ;  
Whoe’er would break the golden gates, or cut the silken thread,  
Or who would dare to crush the flowers down beneath his tread,  
Soon for his pride would leave to pledge a foot and hand ;  
Thus Laurin, King of Dwarfs, rules within his land.’ \*

Is not King Laurin the enchanted prince of ‘Beauty and the Beast,’ of whose roses we have all heard ?

The rose, however, sprung from the blood of Adonis, was the flower of Aphrodite before the Dwarf King had planted his mysterious garden. A new origin was devised for it in Christian times ; and Lord Lindsay has quoted the legend as an example of the infinite superiority of the Christian ‘symbolism of mute nature’ to that of the elder world. It was when a holy maiden of Bethlehem, ‘blamed with wrong and slandered,’ was doomed to death by fire, that, says Sir John Mandeville, ‘she made her prayers to our Lord that he would help her, as she was not guilty of that sin.’ Then the fire was suddenly quenched, and the burning brands became red ‘roses,’ and the brands that were not kindled white ‘roses’ full of roses. ‘And theise weren the first roses and roses, bothe white and red, that ever any man saughe.’ † Henceforth the rose became the flower of martyrs. It was a basket of roses that the martyr-saint Dorothea sent to the notary Theophilus from the garden of Paradise ; and roses, said the romance, sprang up over all the field of Roncevaux, where Roland and the ‘douze pairs’ had stained the soil with their blood. As an emblem of the Virgin, the rose, both white and red, appears at a very early period ; and it was especially so recognised by St. Domenic, when he instituted the devotion of the rosary with direct reference to the life of St. Mary. The prayers appear to have been symbolised as roses. There is a story of a ‘lordsman, who had gathered much goods of his lord’s,’ and who had to pass with his treasure through a wood in which thieves were waiting for him. When he entered the wood, he remembered that he had not that day said ‘Our Lady’s saulter ;’ and, as he knelt to do so, the Virgin came and placed a garland on his head, and ‘at each Ave she set a rose in the garland that was so bryghte that all the wood shone thereof.’ He

\* Heldenbuch, s. iv., ‘The Garden of Roses.’ The lines in the text—retaining the antique roughness of the original—are from a translation of part of the Heldenbuch, contributed by Sir Walter Scott to Jamieson and Weber’s ‘Northern Antiquities.’

† ‘Travels of Sir John Mandeville,’ p. 70.

was himself ignorant of it; but the thieves saw the vision, and allowed him to pass unharmed.\*

The Virgin, as we have seen, succeeded Freyja in the 'calendar' of Northern flowers. The two 'white' gods of Valhalla—Baldur and Heimdallr—both of whom represent the sun, and whose peculiar epithet referred to the dazzling brightness of sunlight, were replaced in a similar manner by St. John the Baptist, whose midsummer festival is marked, all over Europe, by so many remains of solar worship. He is himself called 'White Saint John' in some old German and Gallic calendars. Flowers with large sun-shaped discs, either white or golden-yellow, were dedicated to Baldur, as the sun-god;† and it was in this manner that the hypericum became the peculiar property of St. John; and, as the 'fuga dæmonum,' was so powerful in repelling the works of darkness;—

'Trefoil, vervain, John's wort, dill,  
Hinder witches of their will.'

One species of St. John's wort (*Hypericum quadrangulare*, or *perforatum*) has its leaves pierced with minute holes, which are said to have been made by the devil with a needle, just as Baldur was pierced with the mistletoe by Loke. The root, too, is marked with red spots, still called 'Baldur's blood' in some parts of Norway, but generally said to be the 'blood of St. John,' and to appear always on the day of his beheading (August 29). The old Northern name of the great horse daisy was 'Baldur's brow;' and this, with many other species of chrysanthemum, all with white or golden flowers, became also dedicated to St. John. The attributes of the Baptist, however, are sometimes shared in a remarkable manner by St. John the Evangelist; and the golden 'sunflowers,' as these chrysanthemums were formerly called (the plant now known by that name is an importation from Peru), are occasionally introduced in representations of the latter saint with singular beauty and fitness. Thus, in stained glass of the twelfth century, filling a window in the apse of St. Remi, at Rheims, the Virgin and St. John appear on either side of the cross, the heads of both encircled by aureoles, having sunflowers in their outer circles. The flowers are turned toward the Saviour on the cross, as toward their true 'sun.' The marygold—one of the Virgin's flowers—is itself a chrysanthemum.

St. John appropriated the flowers of light and sunshine. The hammer-wielding Thor, who fought with the frost giants, is replaced by St. Olaf, St. George, or St. Michael, all of whom

\* 'The Festivall,' Rouen, 1499, quoted by Dr. Rock.

† Finn Magnussen, *Lex. Mythol.*, s. v. Baldur.

fought



fought with monsters and dragons; and sometimes by St. Christopher, whose figure was gigantic, like Thor's. Our royal fern (*Osmunda regalis*), the 'Herb Christopher' of Gerard, may be regarded as having been anciently connected with the Northern god. No one who has seen this stateliest of ferns in its own most favoured haunts—some sheltered Cornish valley, the banks of a rushing Dartmoor stream, or the wooded margin of Grasmere or Killarney—

' ——— like Naiad by the side  
Of Grecian brook, or Lady of the Mere  
Sole sitting on the shores of old romance,'

will doubt that its size and remarkable appearance, especially in autumn, when its deep-green fronds take all the varied crimsons of the sycamore, must have always claimed attention. But alas! we cannot afford room for its history, nor for that of many other plants of name and virtue.

The foxglove is a worthy pensioner of Oberon. It is less easy to account for his choice of the rosemary, the 'ellegrin,' 'elves-green' of Denmark, and the 'alecrim' of Spain, where the name seems to be a corruption of the true Northern word, introduced by the Gothic conquerors. But the virtues of rosemary were formerly regarded as very great. It was used at weddings, gilt, like oak-leaves on King Charles's day; and was hung about the porch and door-posts, to bring good luck into the household. It kept off thieves; and, best of all, it could make old folks young again. There was once, says 'Galiene'—in whom we are to recognise the wise physician Galen—a gouty and crooked old queen, who looked back to her dancing days with longing regret. So—

' Of rosmaryn she took six pownde,  
And ground it well in a stownde,'

and then mixed it with water, in which she bathed three times a day, taking care to anoint her head with 'gode balm' afterwards. Her old flesh fell away; and she became so young, tender, and fresh, that she began to look out for a husband.\* We have thought it right to give our readers the full benefit of the prescription; but it may be feared that the elves have withdrawn their gift in these latter days.

The root of the common bracken, cut across, not only displays the figure of an oak-tree, but foretells by its markings much that is of special interest to the investigator, always supposing that he has the power to read them aright. But it is on

\* The story is from an old English poem on the virtues of rosemary, printed by Wright and Halliwell, '*Reliquiæ Antiquæ*,' i. 195.

the eve of St. John, when the hosts of elf-land are abroad in greatest power, that the fern becomes most mysterious. It then puts forth, at dusk, a small blue flower, which soon disappears; and the wonderful seed, quickly ripening, falls from the plant at midnight. He who 'hath the receipt of fern-seed may walk invisible.'\* It must be carefully caught in a white napkin, as it falls; and the elves will no doubt 'whisk about the ears' of the catcher, as Aubrey declares they did in his days about the ears of one who undertook the adventure. These passages are well known. There is a curious reference to the old belief in the works of Dean Jackson, one of the best and most learned divines of the seventeenth century, which has been less frequently quoted:—

'It was my hap,' he writes, 'since I undertook the ministry, to question an ignorant soul (whom, by undoubted report, I had known to have been seduced by a teacher of unhallowed arts to make a dangerous experiment) what he saw or heard when he watcht the falling of the *fernseed* at an unseasonable and suspicious hour. "Why," quoth he, fearing (as his brief reply occasioned me to conjecture) lest I should press him to tell before company what he had voluntarily confessed unto a friend in secret some fourteen years before), "do you think that the devil hath aught to do with that good seed? No; it is in the keeping of the *King of Fayries*, and he, I know, will do me no harm, although I should watch it again." Yet had he utterly forgotten this king's name, upon whose kindness he so presumed, until I remembered it unto him out of my reading in *Huon of Bordeaux*.

'And having made this answer, he began to pose me thus:—"S", you are a scholar, and I am none. Tell me what said the angel to Our Lady? or what conference had Our Lady with her cousin Elizabeth concerning the birth of St. John the Baptist?

'As if his intention had been to make bystanders believe that he knew somewhat more on this point than was written in such books as I use to read.

'Howbeit, the meaning of his riddle I quickly conceived, and he confessed to be this: that the Angel did foretell John Baptist should be born at that very instant in which the *fernseed*, at other times invisible, did fall; intimating, further (as far as I could then perceive), that this saint of God had some extraordinary virtue from the *time or circumstance* of his birth.'†

The name of the 'King of Fayries,' who presented Sir Huon of Bordeaux with the enchanted horn, whose sound would bring fairy help to the knight whenever he might need it, was Oberon, which Mr. Keightley has shown to be identical with 'Elberich.'

\* King Henry IV., Part i., act 2, scene 1.

† Jackson's Works, vol. i., p. 916 (London, 1673). The passage is given in 'Choice Notes from Notes and Queries—Folk Lore,' p. 64.

It was apparently in the picturesque romance of Huon that Shakspeare found the name which now shines upon all the world in so dazzling a light of poetry.

Less famous, perhaps, than the fern, but almost as mysterious in its direct connexion with the elfin races, is the mountain ash, or rowan; and into what lovely places—what wild, heathy coppices—what solitary hollows of the moorland—its very name takes us! As we write there rises before us a half-wooded glen on the skirts of Dartmoor, where the hill-stream descends from ledge to ledge in a succession of falls, filling all the place with its wild music. At the foot of one of the larger waterfalls rises a mountain ash of great age and size; its clusters of scarlet berries sparkling in the gleams of sunlight that sweep across, and forming an admirable foreground to the grey, lichen-tinted rocks, and the patches of oaken coppice and underwood, with which the steep sides of the glen are lined. It is completely Wordsworth's picture:—

‘————— the pool  
Glow at her feet, and all the gloomy rocks  
Are brightened round her.’ \*

No more perfect trysting-place for the pixies could possibly be imagined; and they were accordingly often seen in old times, say the neighbours, under the branches of their favourite tree—a certain proof that the pixies are, after all, of no very evil nature. For the rowan is the especial property of the ‘light’ elves; and crosses made from its wood, or sprays of its leaves hung from the rafters, will prevent any evil creature from entering the house or the cattle-sheds. In the old North the tree was called ‘Thor’s helper,’ because it bent itself to the grasp of that god when on his way to the land of the frost giants he had to cross a river which a sorceress had made to overflow. Hence the tree was greatly revered by the Norsemen. At Modrufell, on the north coast of Iceland, is, or was, a large rowan, always on Christmas eve stuck full of torches, which no wind could possibly extinguish; and one of the Orkneys possessed a still more mysterious tree, with which the fate of the islands was bound up, since, if a leaf was carried away, they would pass to some foreign lord. Veneration for the mountain ash, however, was by no means confined to the Scandinavian north. Many a Welsh churchyard had its ancient rowan, taking the place of the yew-tree in England; and small crosses made from its wood were solemnly distributed on certain festivals, as a protection from evil spirits. The great beauty of the tree—covered in spring with its clusters of

\* Excursion: ‘Churchyard among the Mountains.’

white flowers, and in autumn bright with scarlet berries, both of which render it a conspicuous object in the woods—may account to some extent for the marvellous properties assigned to it; but it seems also to partake of the sanctity of the ash Yggdrasil; and it may perhaps be the Western representative of a still more ancient world tree. At Boitpoor, says Bishop Heber,

‘we passed a fine tree, with leaves at a little distance so much resembling those of the mountain ash, that I was for a moment deceived, and asked if it did not bring fruit? They said, no; but that it was a very noble tree, being called the Imperial tree for its excellent properties; that it slept all night, and wakened and was alive all day, withdrawing its leaves if any one attempted to touch them. Above all, however, it was useful as a preservative against magic. A sprig worn in the turban, or suspended over the bed, was a perfect security against all spells, or the evil eye; insomuch that the most formidable wizard would not, if he could help it, approach its shade. One, indeed, they said, who was very renowned for his power (like Lorinite, in the Kehama) of killing plants and drying up their sap with a look, had come to this very tree, and gazed on it intently; but, said the old man, who told me this with an air of triumph, “look as he might, he could do the tree no harm.”’ \*

The Bishop remarks on the singularity of trees so similar having the same superstitions attached to them. ‘Which nation,’ he asks, ‘is in this case the imitator? or from what common centre are all these common notions derived?’

Sir Edward Bulwer Lytton has suggested, in his ‘Strange Story,’ that the wood of certain trees to which magical properties are ascribed may in truth possess virtues little understood, and deserving of careful investigation. The rowan would take its place among these; as would the common hazel, from which the miner’s divining rod is always cut. The use of this ‘baguette divinatoire,’ as it is called by Vallemont, who towards the end of the seventeenth century wrote an elaborate treatise on it, was by no means confined to the search for veins of metal, or for water. It assisted in the pursuit of criminals; and Vallemont gives the ‘histoire surprenant d’un paysan, qui, guidé par la baguette divinatoire, a poursuivi un meurtrier durant plus de 45 lieues sur terre, et plus de 30 lieues en mer.’ The hazel is so far connected with the elves that, according to the Cornish miners, the rod is guided to the mine by the pixies; for all the treasures of the earth are in their keeping, and many a rich lode has been discovered by the songs of the small people heard on the moors at nightfall. In some parts of Germany the call of the cuckoo is thought to dis-

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\* ‘Indian Journal.’

close mines; and certain plants—the cuckoo's 'bread,' the 'cuckoo flower' (the latter is the large purple orchis very common in England), are believed to grow in most luxuriance where the depths of the earth are rich in metal. The cuckoo has always been one of the chief birds of augury, and many flowers which appear nearly at the same time with it have received its name, and a certain share of its prophetic character. One of these was perhaps the plantain, or waybread, said to have been once a maiden, who, watching by the wayside for her lover, was changed into the plant which still loves to fix itself beside the beaten path. Once in seven years it becomes a bird, either the cuckoo or the cuckoo's servant, the 'dinnick,' as it is called in Devonshire, the German 'wiedhopf,' which is said to follow its master everywhere.\*

Although it is not impossible that almost every plant which the old herbalists record as bearing the name of some saint, or as distinguished by some specially religious epithet, might be traced back, if we had the means, to the days of heathenism, there are many of which we have only the later 'canonization,' and which we must accept as the more direct representatives of the monastic garden and herbary. How amply these were stocked, and with how many of the plants most famous in ancient leechcraft, is evident from a glance at the very curious plans of the great monastery of St. Gall, drawn up, it is said, by Eginhardt, toward the end of the eighth century.† In these, every bed in the garden is marked out, and the name of the herb with which it should be filled carefully inserted. It was, no doubt, from their great virtues as 'all heals,' or 'singular wound herbs,' that such names as 'angelica' and 'archangel' were bestowed on the plants that still bear them. The 'herba benedicta,' 'herb bennet,' the 'blessed' herb (*Geum urbanum*), was a remedy for nearly all diseases under the sun. Its graceful trefoiled leaf, and the five golden petals of its blossoms, symbolizing the Holy Trinity and the five wounds of Our Lord, early attracted the attention of the artist-monk; and toward the end of the thirteenth century the plant frequently occurs as an architectural decoration, sometimes in patterns on the walls, and sometimes in the leafage encircling pier capitals. The vervain (*verbena*), called the 'holy herb,' should perhaps have been placed in the former division, since it was, according to Pliny, one of the sacred plants of the Druids,

\* Grimm, D. Myth., p. 787. The latter part of the belief is a piece of Devonshire folk-lore.

† These plans were first published by Mabillon, in the 'Annales Ord. Benedict.,' and have been made the subject of a very interesting paper, by Professor Willis, in the 'Archæological Journal.'

and was gathered by them with all manner of mystic ceremonies. It is not easy to see why its slender spikes of grey flowers should have been held in such repute, unless the old rhyme, itself half a charm, gives us the reason :—

‘Hail to thee, holy herb !  
 Growing on the ground  
 On the Mount of Olivet  
 First wert thou found.  
 Thou art good for many an ill,  
 And healest many a wound ;  
 In the name of sweet Jesu  
 I lift thee from the ground.’

The trefoil, or ‘Herb Trinity,’ has an especial interest from the use which, as tradition asserts, was made of it by St. Patrick (although the story is to be found in none of the lives—not even the latest and most legendary—printed by Colgan), as an illustration of the divine mystery. The leaf which is now generally recognized as the Irish emblem is that of the white clover, but the name shamrock (seamrog) seems to be generic, and is applied also to the purple clover, the speedwell, the pimpernel, and the wood sorrel. The leaf of herb Trinity is of course ‘noisome to witches.’ The veronica, or small speedwell, one of the plants to which the name shamrock is given, was also effective against evil spells, and its bright blue flowers were thought to display, in their form and markings, a representation of the kerchief of Saint Veronica, impressed with the features of Our Lord. Many other flowers received the names of saints for less definite reasons, —partly, perhaps, because they blossomed about the time of the saint’s festival, and partly because they were found in plenty about the place which contained his shrine. Although the ‘Canterbury bells’ which abound in the Kentish woods have only an indirect connexion with St. Thomas—having been so called from the small horse-bells of the pilgrims, which they resembled in shape,—the small red pink (*Dianthus prolifer*), found wild in the neighbourhood of Rochester, is, perhaps, the original ‘sweet Saint William,’ for the word ‘Saint’ has only been dropped since days which saw the demolition of St. William’s shrine in the cathedral. This, however, is but a conjecture, and we must be content to remain uncertain whether the masses of bright flowers which form one of the chief glories of old-fashioned gardens commemorate St. William of Rochester, St. William of York, or—likeliest, perhaps, of the three—St. William of Acquitaine, the half-soldier, half-monk, whose fame was so widely spread throughout the South of Europe.

The charm and tranquillity of the monastic garden—a world  
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of peaceful beauty often set down in the midst of the wildest woods and mountains—have been worthily dwelt upon by M. de Montalembert, the pleasantest and most eloquent, if in some respects the most one-sided, of the many advocates who of late years have taken in hand the cause of the monks. To the Benedictines and Cistercians—the first great agriculturists of Europe, and the first great gardeners, the true predecessors of the Hendersons and Veitches of our own day—we are indebted for many of the old, well-loved flowers that will always keep their places in spite of their gayer, but less permanent, modern rivals. The wall-flower that ‘scents the dewy air’ about the ruined arches of its convent; the scarlet anemone, that flowers about Eastertide, and is called in Palestine the ‘blood-drops of Christ;’ the blossoming almond-tree, one of the symbols of the Virgin; and the marygold, that received her name, are but a few of the old friends, brought long ago from Syria by some pilgrim monk, and spread from his garden over the whole of Europe. Within those quiet walls the brother Pacificus of his monastery found material for the studies of leaf, flower, and insect with which to decorate the borders of his missals and breviaries; and the sculptor could there arrange his wreaths of white lilies, or his branches of ‘herb bennet,’ before transferring them in stone to the capitals of the neighbouring church:—

‘Nor herb nor flow’ret glistened there  
But was carved in the cloister arches as fair.’

In the cloister garden, too, the monk was wont to meditate on the marvels of the plants that surrounded him, and to find all manner of mysterious emblems in their marks and tracings. Many displayed the true figure of the cross. It might be seen in the centre of the red poppy; and there was a ‘zucca’ (fig) at Rome, in the garden of the Cistercian convent of Santa Potentiana, the fruit of which, when cut through, showed a green cross inlaid on the white pulp, and having at its angles five seeds, representing the five wounds. This mysterious fig is described and figured by Bosio, who compares it to the ‘Crocefisso de la cepa’ at Valladolid, a representation of Our Lord on the cross, formed naturally, though ‘mirabilmente,’ by the twisted growth of a vine root.\* The banana, in the Canaries, is never cut with a knife, because it also exhibits a representation of the Crucifixion, just as the fern-root shows an oak tree. But the fame of the greatest of all such marvels arrived at Rome in the

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\* Bosio, ‘La Trionfante e Gloriosa Croce.’ Roma, 1610.

year 1609, whilst Bosio was labouring over his ponderous folio on the 'Triumphs of the Cross;' and he pauses accordingly, half doubtful whether he ought to say anything about the '*stupendo e maraviglioso fiore*' of which he had been told, seeing that it was a matter almost too '*mostruosa e straordinaria*' for belief; but quite unwilling to omit all notice of it, especially as he was daily receiving new confirmation of its wonders. This '*maraviglioso fiore*' was the Passion flower of the New World.

Drawings and descriptions of the Passion flower were published for the first time, in both Spain and Italy, in 1609. Bosio's chief authority was Father Emmanuello de Villegas, an Augustinian monk, and a native of Mexico, who was at this time visiting Rome. But Father Emmanuel's wonderful account had been confirmed, we are assured, by many personages '*di qualità e di gravità*' who had travelled in New Spain, and especially by certain Mexican Jesuits. It would seem, says Bosio, that in this wonderful and mysterious 'flower of the five wounds' ('*flor de las cinco llagas*'), as the Spaniards called it, the Creator of the world had chosen to represent the principal emblems of his Son's Passion; so that in due season it might assist, when its marvels should be explained to them, in the conversion of the heathen people in whose country it grew. He goes on to describe the flower as follows:—The upper petals are tawny ('*di color leonato*') in Peru; in New Spain they are white, tinged with rose colour. The fringelike filaments above are blood-red; 'as though referring to the scourge with which Our Lord was beaten.' In the midst of the flower rises the column to which He was bound; and above are the nails, both of a 'clear green.' Above, again, is the crown of thorns, surrounded by a kind of veil of threads—seventy-two in number—(the traditional number of the thorns on Our Lord's crown) coloured like a peacock's feather ('*di color pavonazzo*'). In the centre of the flower, and under the column, are five marks or spots, of a blood colour, 'clearly representing the five chief wounds that Christ received on the cross.' The plant, he continues, is rich in leaves, which in shape resemble the iron of a pike or lance-head, and refer to that with which Our Lord's side was pierced. At nightfall the flower closes entirely; and in the day it only half unfolds itself, keeping always the form of a bell, so that the mysteries so wonderfully enclosed in it cannot be generally seen. Bosio, however, thought proper to draw it fully opened, '*per gusto de' pii lettori*'—who would thus have the comfort of contemplating in the flower the 'profound marvels of its, and of our own, Creator.' The close shrouding of the flower, he suggests, may have been designed,



designed, by infinite wisdom, as an indication that the mysteries of the cross were not to be revealed to the heathen people of those countries until such time as it seemed good to Him.

In spite of the suggestion of our own Master Parkinson, who was the first to describe the Passion flower in England, that it should be assigned to that 'bright occidental star Queen Elizabeth, and be named in memory of her the Virgin climber,' the Passion flower has retained its original name and significance. It is the one great contribution of the Western hemisphere to the symbolical flowers of Christendom; and its starlike blossoms have taken a worthy place beside the mystical roses and trefoils of ecclesiastical decoration; never more appropriately than in the ironwork of the beautiful choir-screens at Lichfield and at Hereford.

Before concluding, we must say a word or two about the 'Floral Calendars' which we have placed at the head of this article. A complete arrangement of the plants and flowers named after certain saints, or recording the festivals of the Church, so far as such plants exist, would be of very great interest and value. It would not only record much curious folklore, now rapidly passing away, but would bring back to us many a graceful and touching association with which earlier ages regarded the commonest flowers of the field and the hedgerow. Something of the sort is attempted in the pamphlet entitled '*Flores Ecclesiæ*,' which, following the Roman calendar, assigns a particular flower to the saint who is recorded on each successive day throughout the year. Many are thoroughly appropriate, but by far the greater number are selected in the most arbitrary fashion; and we can see not the slightest reason for associating St. James the Less with 'red bachelors' buttons;' St. Mammutus with 'Lancashire asphodel;' or St. Willibrord with the 'Mexican tiger flower.' If colour alone is the rule, we may surely be allowed to choose our own flowers. For anything else there is no other guide than tradition; and the compiler of the '*Flores Ecclesiæ*' seems in most instances to have followed a peculiar tradition of his own. In the beautiful volume which stands next on our list—'*The Church's Floral Calendar*'—we find something of the same fault. We can see no reason why certain flowers should be chosen, rather than others of the same colour and time of flowering, as characteristic of the saint whose festival they illustrate. But in this case the arbitrary selection—which after all is but rare—is balanced by the beauty of the illuminations, which, in true Mediæval fashion, ornament each page; and by the well-chosen verses which Miss Cuyler, gathering them from poets old and new, has brought to illustrate her subject.

subject. In truth, every such book is welcome, provided it display a true love for the 'flowers of the field.' They are their own best interpreters; and there is not one that cannot preach its own sermon.

'With all, as in some rare limned book, we see  
Here painted lectures of God's sacred will.  
The daisy teacheth lowliness of mind;  
The camomile, we should be patient still;  
The rue, our hate of vice's poison ill;  
The woodbine, that we should our friendship hold;  
Our hope, the savory in the bitterest cold.'\*

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ART. VIII.—*Roba di Roma*. By William W. Story. Second Edition, 2 vols., post 8vo. London, 1863.

THE author of this book is a son of the celebrated American Judge Story, and has risen to high eminence as a sculptor. His 'Cleopatra' attracted much admiration in the International Exhibition of 1862, although open to the serious objection that, whereas the artist had laboured to give beauty and refinement to the African type of face, the daughter of the Ptolemies was really of Greek descent; and among the most remarkable novelties of the Roman studios last winter was Mr. Story's model of 'Saul tempted by the Evil Spirit'—a figure of extraordinary power, and, as we believe, thoroughly original, notwithstanding the remembrances which it almost inevitably suggested, of King Claudius in Maclise's 'Hamlet,' and of Scheffer's 'König in Thule.'

Mr. Story is not one of those Americans who, with the unfailing red book in hand, 'do the whole Vatican and Peter's easily in one day;' who in a few hours make up their minds that 'Rome is a one-horse place,' and will never allow us to enjoy anything there, or in any other part of Europe, without some disparaging comparison with things beyond the Atlantic. His knowledge of Rome is the result of long residence; he loves the place; he has gone among its people, and knows their ways; and when he draws a comparison with other nations, it is not for the sake of running down the Romans, but rather by way of vindicating them. How far he is disposed to carry this at times may appear from his plea for the stiletto, the use of which he attributes not merely to the passionate nature of the Italians, but

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\* Henry Peacham.

also to their entire distrust of the possibility of legal redress in the courts. He observes, that

‘in the half-organized society of the less civilized parts of the United States, the pistol and bowie-knife are as frequent arbiters of disputes as the stiletto is among the Italians. But it would be a gross error to argue from this, that the Americans are violent and passionate by nature; for, among the same people in the older States, where justice is cheaply and strictly administered, the pistol and bowie-knife are almost unknown.’—i. 112-3.

The chief fault of the book is, that the author is not content with his proper work. In the opening chapter he professes to write for travellers, ‘to whom the common out-door pictures of modern Roman life would have a charm as special as the galleries and antiquities, and to whom a sketch of many things, which wise and serious travellers have passed by as unworthy their notice, might be interesting. . . . The common life of the modern Romans, the games, customs, and habits of the people, the every-day of To-day . . . this (he says) is the subject which has specially interested me’ (i. 7). We expect, therefore, to find in Mr. Story’s volumes the result of his observation of actual Roman life—sketches of things which every traveller may see, but sketches drawn with an understanding which is beyond the reach of the mere passing traveller; and such is the best part of the book. But, unhappily, Mr. Story is not satisfied with the character of a skilful observer and sketcher, but is bent on showing us that he is a man of vast learning and profound research; and hence it has come to pass that by far too large a portion of his pages is occupied with matter fitter for the grave and sober treatises with which, in the passage just quoted, he disclaims all rivalry—fit for anything rather than for a work of light and agreeable gossip.

Nor can we say that the learning which is thus ostentatiously thrust on us is of any very satisfactory kind. There may be simple persons in the world who would look with awe on such a string of references as the following:—

‘Tertullian de an., cap. 46; id., lib. i. cap. 82; lib. iii. cap. 28; lib. iv. cap. 25. Artemidorus de Somn., lib. xi. cap. 14 and 49. Fulgentius Mythol., lib. i. Cicero de Divinat., lib. i. See also Leopardi, Dei Sogni, p. 68.’—i. 134.

But there is something about the physiognomy of this note which to any one who has had some experience of the artifices of literature, must suggest an uncomfortable suspicion; and, without having attempted to ‘see Leopardi,’ we are pretty certain that the other references are borrowed from him wholesale. And so

it is with Mr. Story's learning throughout. It has a second-hand look; and, in proportion as his references become more plentiful, we find ourselves the less inclined to give him credit for acquaintance with the writings which he cites.

The continual blunders in Latin and other foreign words may be charitably accounted for by the supposition that Mr. Story was not in England while his book was in the press, and therefore had not the opportunity of correcting his proof-sheets. We cannot suppose that he wrote such things as 'Circus Agonalæ' (ii. 113, 199); or 'Suetonius in Vit. Titus' (i. 227); or 'Vopiscus in Vit. Probus' (*ib.*); that it was he himself who repeatedly gave us *cloacina* for *cloaca* (i. 316-7), and Lepsius for Lipsius; who put 'old Jason' for Æson (ii. 315); who made 'versipelles' singular, and 'naumachia' plural (i. 231); or that, when he thought it expedient to mention Philo's Legation to Caligula by its Greek title, he was unable to give us anything more like the correct form than 'Περσβειας Γπρος αυον' (ii. 44). Yet surely Mr. Story, if unable to superintend his own printing, might have secured the help of some competent corrector; or, at least, he might have set the matter right in his second edition. But what are we to say to such a specimen of Mr. Story's Latin as the interpretation of the Italian name for spring—*primavera*—by 'the first true thing' (i. 87)? Or what excuse can be made for the blunders which crowd the page when he displays his knowledge of history? But we must beg the reader to understand why we notice his blunders, whether of language or of history. It is not that we would blame him for not knowing things which he is in nowise bound to know, but because he pretends, out of place, to a knowledge which he really has not; because he affects an acquaintance with somewhat recondite books, whereas he seems really to know them only through the medium of other books.

Little as we like Mr. Story's learning, we relish his wit still less. His jocosity is really overwhelming, and will never leave us any peace. In the midst of descriptions which ought to be simple, he douches us with puns, tags of quotation distorted to facetious uses, and other bad jokes of all sorts, in a way that is quite distressing; and both in the comic and in the graver parts there are, as is common in American writings, too evident traces of a study of cockney models. The style, as might be expected, has all those latest improvements which are fast changing our English tongue to something very different from its older self. Here is a specimen:—

'May has come again,—“the delicate-footed May,” her feet hidden in flowers as she wanders over the Campagna, and the cool breeze of the  
the

the Campagna blowing back her loosened hair. She calls to us from the open fields to leave the wells of damp churches and shadowy streets, and to come abroad and meet her where the mountains look down from roseate heights of vanishing snow upon plains of waving grain. The hedges have put on their best draperies of leaves and flowers, and, girdled in at their waist by double osier bands, stagger luxuriantly along the road like a drunken bacchanal procession, crowned with festive ivy, and holding aloft their snowy clusters of elder blossoms like *thyrsi*. Among their green robes may be seen thousands of beautiful wild flowers,—the sweet-scented laurustinas, all sorts of running vetches and wild sweet-pea, (&c. &c., ending with the bursting of ‘a cascade of vines covered with foamy Banksia roses.’)—i. 152-3.

But, after all, what is gained by all these fine varieties of words? Might not the picture of May have been set quite as well before us without them?

Good humoured as Mr. Story unquestionably is, there is yet a kind of flippant superciliousness about him which is very provoking. And in matters connected with religion (which necessarily come often before us in a book relating to Rome) this is especially annoying, whether it take the form of contemptuous toleration, of indignant denunciation, or (which is most usual) of sarcastic badinage. The explanation of much that offends us in Mr. Story is to be found at vol. ii. p. 224, where he tells us that ‘the most careful investigations of the catacombs . . . have failed to elicit the slightest indication in favour of the peculiar tenets of the Roman Church respecting *the Trinity*, the worship of the Virgin, the adoration of saints, or the supremacy of the Pope as Vicar of Christ.’ Without inquiring how this may be, it is enough to observe that the doctrine of the Trinity, unlike those with which it is here strangely joined as peculiar to Rome, has ample warrant in the writings of the ante-Nicene Fathers; so that it has no need of any evidence from the catacombs. But we quote the passage, not with any controversial views, but in order to furnish a key to Mr. Story’s tone on religious matters, and to reprobate the lack of judgment which has led him to introduce religious controversy into such a work as this.

But, having eased our conscience by pointing out certain faults of Mr. Story’s book, let us now turn to the more agreeable task of looking over his pages for the sake of the amusement which is to be found in them. In the earlier chapters—of which, as he tells us, the substance originally appeared in an American magazine—he takes his subjects according to the course of the Roman year. Beginning with his arrival at Rome for the third time, on the 6th of December, 1856, he sketches his entrance from Civita Vecchia:—

‘After

'After leaving the Piazza [of St. Peter's], we get a glimpse of Hadrian's Mole, and of the rusty Tiber, as it hurries, "*retortis littore Etrusco violenter undis*," as of old, under the statued bridge of St. Angelo,—and then we plunge into long, damp, narrow, dirty streets. Yet—shall I confess it?—they had a charm for me. Twilight was deepening into dark as we passed through them. Confused cries and loud Italian voices sounded about me. Children were screaming,—men howling their wares for sale. Bells were ringing everywhere. Priests, soldiers, *contadini*, and beggars thronged along. The *Trasteverini* were going home, with their jackets hanging over one shoulder. Women, in their rough woollen gowns, stood in the doorways bare-headed, or looked out from windows and balconies, their black hair shining under the lanterns. Lights were twinkling in the little cavernous shops, and under the Madonna-shrines far within them. A funeral procession, with its black banners, gilt with a death's-head and cross-bones, was passing by, its wavering candles borne by the *confraternità*, who marched carelessly along, shrouded from head to foot in white, with only two holes for the eyes to glare through.'—i. 4, 5.

At present, although the traveller misses the plunge into the glories of St. Peter's on entering the city, the drive from the station outside the Porta Portese, through the squalor of the Trastevere, across the island, and by the Theatre of Marcellus, is even more strangely striking than that which Mr. Story here describes. But before the English next begin their annual occupation of the Piazza di Spagna and its neighbourhood, all this will be changed, as the railway will have been carried across the Tiber into the central station, close to the Baths of Diocletian, from which the way to the Piazza, or to the Corso, will lie through streets which have but little of the peculiarly Roman character. But let Mr. Story go on:—

'It was dirty, but it was Rome; and to any one who has long lived in Rome even its very dirt has a charm which the neatness of no other place ever had. All depends, of course, on what we call dirt. No one would defend the condition of some of the streets, or some of the habits of the people. But the soil and stain which many call dirt I call colour; and the cleanliness of Amsterdam would ruin Rome for the artist. Thrift and exceeding cleanness are sadly at war with the picturesque. To whatever the hand of man builds the hand of Time adds a grace, and nothing is so prosaic as the rawly new. Fancy for a moment the difference for the worse, if all the grim, browned, rotted walls of Rome, with their peeling mortar, their thousand daubs of varying grays and yellows, their jutting brickwork and patched stonework, from whose intervals the cement has crumbled off, their waving weeds and grasses and flowers, now sparsely fringing their top, now thickly protruding from their sides, or clinging and making a home in the clefts and crevices of decay, were to be smoothed to a complete level,

level, and whitewashed over into one uniform and monotonous tint. What a gain in cleanliness ! what a loss in beauty ! An old wall like this I remember on the road from Grotta Ferrata to Frascati, which was to my eyes a constant delight. One day the owner took it into his head to whitewash it all over,—to clean it, as some would say. I look upon that man as little better than a Vandal in taste,—one from whom “knowledge at one entrance” was “quite shut out.”—i. 5, 6.

The beggars of Rome are innumerable, and swarm everywhere. They beset you in your walks, and, if you stop a moment, in carriage or on foot, half a dozen of them are upon you at once. They thrust themselves between you and your friend when you are in the most anxious discussion of your plans and movements, and noisily urge their affairs on you as far more important to you than your own. And, as the superstition of Rome tends to affect the sense of religion unfavourably, so the beggary of Rome—much of it feigned, and all of it importunate—tends to lessen the feelings of sympathy with human misery. It very speedily becomes clear to the most literal of Christians that the precept, ‘Give to every one that asketh thee,’ cannot have been meant to be observed to the letter. If so, it would be necessary to sally forth every morning with a huge bag of copper, and to hire a porter—one of that class which travellers in Italy have reason to abhor for its extortion above all other classes—to carry it for you. Towards the end of the last Roman season—so late, indeed, that but few English remained to observe the effect—an edict against mendicancy was issued. No one was to beg unless fortified with a government certificate, and every holder of such a certificate, instead of being allowed to ply his trade all over the city, was restricted to one specified place. At first this regulation seemed to do its work in a considerable degree; but, if we may trust the late correspondence of English papers, it has since proved an utter mockery. But Roman beggary, at its worst, was a trifle in comparison to that of some places in Southern Italy. At Amalfi, that melancholy wreck of a great commercial city, the beggars are so nearly the entire population, that it seems as if they must live mainly on each other; and if you go into the cathedral of Sorrento on a Sunday afternoon, you may find that children break away from catechism-classes to persecute you with cries for a ‘bottiglia!’

One renowned personage of the beggar class is described by Mr. Story with great zest.

‘As one ascends to the last platform, before reaching the upper piazza in front of the Trinità de’ Monti, a curious squat figure, with two withered and crumpled legs, spread out at right angles, and clothed in long blue stockings, comes shuffling along on his knees  
and

and hands, which are protected by clogs. As it approaches, it turns suddenly up from its quadrupedal position, takes off its hat, shows a broad, stout, legless *torso*, with a vigorous chest and a ruddy face, as of a person who has come half-way up from below the steps through a trap-door, and with a smile whose breadth is equalled only by the cunning which lurks round the corners of the eyes, says, in the blandest and most patronizing tones, with a rising inflection, "*Buon giorno, Signore! Oggi fa bel tempo,*" or "*fa cattivo tempo,*" as the case may be. This is no less a person than Beppo, King of the Beggars, and Baron of the Scale di Spagna. He is better known to travellers than the Belvedere Torso of Hercules, at the Vatican, and has all the advantage over that wonderful work, of having an admirable head and a good digestion. Hans Christian Andersen has celebrated him in "*The Improvisatore,*" and unfairly attributed to him an infamous character and life; but this account is purely fictitious, and is neither *vero* nor *ben trovato*. Beppo, like other distinguished personages, is not without a history. The Romans say of him, "*Era un Signore in paese suo,*"—"He was a gentleman in his own country,"—and this belief is borne out by a certain courtesy and style in his bearing which would not shame the first gentleman in the land. He was undoubtedly of a good family in the provinces, and came to Rome, while yet young, to seek his fortune. His crippled condition cut him off from any active employment, and he adopted the profession of a mendicant, as being the most lucrative, and requiring the least exertion.—i. 35.

This worthy is evidently satisfied with his occupation as an honest and honourable way of life. To a lady who ventured to ask him how he could go on begging, when he was believed to have given his daughter a portion of 1000 scudi, he calmly replied, 'I have another daughter to portion now.' And not only did he receive a regular monthly payment from many sojourners at Rome, as a composition for being allowed to mount the Spanish Steps in peace, but we have even heard of admirers who sent him tokens of remembrance from England. But King Beppo's admirers will be grieved to hear that he has lately had a fall. In the middle of last season he was missed from his accustomed haunts, and the sudden disappearance of the Pope from the Vatican could hardly have raised greater astonishment or perplexity. After a day or two it was reported that the great Beppo was in gaol; some said, for neglecting the knife-grinder's example—

'But for my part I never like to meddle  
With politics, Sir;'

some said that, after having received many fruitless warnings as to his style of language, he had been pounced on while pouring forth a tremendous torrent of blasphemy; some, that he had been caught in throwing a stone at a lady. At length he reappeared, but,



but, instead of being allowed to resume his throne on the Spanish Steps, he was restricted to the Piazza of St. Agostino; and there, on being questioned by a young English lady as to the cause of his late calamities, he appealed to the supposed universal weakness of her sex and nation by telling her that he had been sent to prison for distributing Protestant tracts!

But beggary is not confined to such persons as Beppo and his brotherhood. There are the mendicant friars, 'those dirty brown brutes,' as we once heard them styled by a young gentleman who was not particularly well versed in the distinctions of the monastic orders. There are the old women who at church-doors rattle coppers in tin boxes—not, as the stranger commonly fancies, for the purpose of showing him that, as they have some money already, he cannot do better than give them more, but in order to collect funds for the buying of charitable masses.

'Nor are these the only friends of the box. Often in walking the streets one is suddenly shaken in your ear, and, turning round, you are startled to see a figure entirely clothed in white from head to foot, a rope round his waist, and a white *capuccio* drawn over his head and face, and showing, through two round holes, a pair of sharp black eyes behind them. He says nothing, but shakes his box at you, often threateningly, and always with an air of mystery. This is a penitent *Saccone*; and as this *confraternità* is composed chiefly of noblemen, he may be one of the first princes or cardinals in Rome, performing penance in expiation of his sins; or, for all you can see, it may be one of your intimate friends. The money thus collected goes to various charities. The *Sacconi* always go in couples,—one taking one side of the street, the other the opposite,—never losing sight of each other, and never speaking. Clothed thus in secrecy, they can test the generosity of any one they meet with complete impunity, and they often amuse themselves with startling foreigners. Many a group of English girls, convoyed by their mother, and staring into some mosaic or cameo shop, is scared into a scream by the sudden jingling of the box, and the apparition of the spectre in white who shakes it.'—i. 55.

These and other classes of beggars make their way up the stairs of lodging-houses, and waylay you as you go out or in. 'But,' says Mr. Story, 'the greatest mendicant in Rome is the Government' (i. 59); and then follows a paragraph which, although perfectly true, would of itself be enough to exclude the book from Rome.

We now come to a chapter on the Christmas holidays and their ceremonies, which, for travellers newly arrived in Rome, have a charm of freshness such as cannot belong to the ceremonies of a later time. We need not say with what zeal our fair countrywomen—especially those of the 'Evangelical' and

Presbyterian persuasions—plunge into these ceremonies, spending the whole night in roaming from one church to another, and winding up with the high mass in St. Peter's on Christmas-day. For ourselves, we must own that we are not disposed to partake of such things otherwise than in moderation, although we, like the rest of the world, have witnessed something of them—from the grand courtly ceremonial of St. Peter's and the brilliant operatic spectacle and music of St. Mary Major's to the pantomimic exhibitions of some pontifical masses, where the bishop, undressing and revesting himself in the sight of the people, irresistibly recalls to our minds the manner in which we have seen a theatrical clown array himself in the finery of some milliner's basket which had fallen in his way. Then there are the exhibition of the Bambino, and the preaching of the children at the Ara Cœli.

'The whole of one of the side-chapels is devoted to this exhibition. In the foreground is a grotto, in which is seated the Virgin Mary, with Joseph at her side and the miraculous Bambino in her lap. Immediately behind are an ass and an ox. On one side kneel the shepherds and kings in adoration; and above, God the Father is seen surrounded by clouds of cherubs and angels playing on instruments, as in the early pictures of Raphael. In the background is a scenic representation of a pastoral landscape, on which all the skill of the scene-painter is expended. Shepherds guard their flocks far away, reposing under palm-trees or standing on green slopes which glow in the sunshine. The distances and perspective are admirable. In the middle ground is a crystal fountain of glass, near which sheep, preternaturally white, and made of real wool and cotton-wool, are feeding, tended by figures of shepherds carved in wood. Still nearer come women bearing great baskets of real oranges and other fruits on their heads. All the nearer figures are full-sized, carved in wood, painted, and dressed in appropriate robes. The miraculous Bambino is a painted doll swaddled in a white dress, which is crusted over with magnificent diamonds, emeralds, and rubies. The Virgin also wears in her ears superb diamond pendants.'

'The general effect of this scenic show is admirable, and crowds flock to it and press about it all day long. Mothers and fathers are lifting their little children as high as they can, and until their arms are ready to break; little maids are pushing, whispering, and staring in great delight; *contadini* are gaping at it with a mute wonderment of admiration and devotion; and Englishmen are discussing loudly the value of the jewels, and wanting to know, by Jove, whether those in the crown can be real.

'While this is taking place on one side of the church, on the other is a very different and quite as singular an exhibition. Around one of the antique columns of this basilica—which once beheld the splendours and crimes of the Cæsars' palace—a staging is erected, from

from which little maidens are reciting, with every kind of pretty gesticulations, sermons, dialogues, and little speeches, in explanation of the *Presepio* opposite. Sometimes two of them are engaged in alternate question and answer about the mysteries of the Incarnation and the Redemption. Sometimes the recitation is a piteous description of the agony of the Saviour and the sufferings of the Madonna,—the greatest stress being, however, always laid upon the latter. All these little speeches have been written for them by their priest or some religious friend, committed to memory, and practised with the appropriate gestures over and over again at home. Their little piping voices are sometimes guilty of such comic breaks and changes, that the crowd about them rustles into a murmurous laughter. Sometimes, also, one of the very little preachers has a *dispetto*, pouts, shakes her shoulders, and refuses to go on with her part;—another, however, always stands ready on the platform to supply the vacancy, until friends have coaxed, reasoned, or threatened the little pouter into obedience. These children are often very beautiful and graceful, and their comical little gestures and intonations, their claspings of hands and rolling up of eyes, have a very amusing and interesting effect.—i. 68–70.

Next follows the Epiphany, with the Befana presents to children, bought in the piazza of St. Eustachio on the eve; and the polyglott exhibition of the Propaganda. The chapel of the college is crowded. At one end rise rows of benches, occupied by the students, among whom are represented many varieties of the human race, and each nation contributes a poem suitable to the occasion, while the whole performance is wound up by a scene in which a dozen languages are heard at once. There is naturally a tendency to multiply as much as possible the number of dialects: thus, among the pieces last year were one in Lowland Scotch (recited by a youth from Prince Edward's Island), one in Swiss-German, and one in 'Rhaetian,' which sounded like a mere Italian patois. The poets for the most part endeavoured to connect the Epiphany with the politics of the day; Rome was figured under the names of Jerusalem and Sion, Victor Emmanuel was girded at in the character of Herod, and the most sacred of parallels was bestowed on Pius IX. The greatest sensation was produced by two very black Africans, who followed up the recitation of their verses by singing some specimens of their native music, and convulsed the audience—students, professors, and all—with laughter, while they themselves preserved the most solemn composure.

Mr. Story, we believe, does not mention this performance, nor does he say much of the benediction of the lambs, which takes place in the basilica of St. Agnes, without the walls, on the 21st of January. On this occasion pontifical mass is per-

formed in the ancient church. At a certain stage in the service, two white lambs, adorned with ribbons, and lying on cushions, with their legs tied together, are carried up to the altar, while the faces not only of the congregation, but of the officials who carry them, and the clergy who receive them, are relaxed into the broadest smiles; and when, at the moment of the benediction, one of the poor little animals utters a *ba-a-a*, the gravity of every one is entirely upset. It is certainly one of the oddest religious rites to be seen anywhere in Christendom.

The Carnival was this year a somewhat dismal time, thanks to political causes. The leaders of the Roman world held aloof from it; masks were allowed only in so far as necessary to defend the face from the showers of confetti; and, instead of the wild excitement which used to attend the lighting of the *moccoli*, when every one in the crowded Corso tried to blow out his neighbour's light, and to defend his own, they were confined to the balconies of houses. But let us suppose that, as Mr. Story says in the beginning of his fifth chapter, 'the gay confusion of the Carnival is over,' or, as a learned German Jesuit expressed the same fact to us—'Die Narrenzeit ist vorüber'—and that Lent has set in. The inexperienced traveller expects a dull time; and, if you cannot live without dancing, which at this season is forbidden by the police, no doubt you will find it dull. But in other respects the Roman Lent is really a very lively season—very far different, indeed, from the Lent of a decorous English cathedral town. Evening parties are more plentiful than ever—the only difference from other seasons being, that our Roman Catholic friends hold themselves bound, it is said, to confine themselves to water-ice, and to eschew cream. If theatres are closed, concert-rooms are open all the more; and every day there is a 'station' at some church or other which is indicated in the *Diario Romano*. For many a little church, which is perhaps shut up almost all the rest of the year, this Lenten station is the gayest day of the three hundred and sixty-five. The street near it is strewed with sand and boxwood; the unfailing beggars line the approach and take up their position on the steps; carriages are seen before the door, and the pavement within is crowded with kneeling people, among whom the visitor who is led by curiosity rather than by devotion winds in and out in search of what is to be seen. At such times it is that you may best see the round church of St. Stephen, the meat-market of Imperial Rome, with its hideous pictures of martyrdoms, looking like the early woodcuts in Foxe run mad; St. Nereus and Achilleus, where the great ecclesiastical annalist Baronius, once its titular cardinal, studied to restore the primitive

tive arrangement of a church, and by an engraved prayer implored his successors to leave it as he had left it; St. Cecilia in the Trastevere, with its rich reliquaries and plate, and the beautiful statue of the saint; St. Pudentiana, the ancient church which gives his title to Cardinal Wiseman; St. Mary of Egypt, formerly the temple of Fortuna Virilis, and now belonging to the Armenians of the Roman communion; St. Theodore (popularly called St. Toto), on the site of a temple of Romulus or Vesta; St. George in Velabro, where Rienzi proclaimed the return of the Romans to 'the ancient good estate'; St. Saba, St. Bibiana, St. Balbina, and a multitude of other curious and interesting places, which at other times you might find it hard to enter. True it is that the architecture is disguised for the time by those crimson draperies in which it is the odd custom of Rome to swathe the pillars of churches on festival days. But then you probably come in for some sight peculiar to the day—such as the relics of St. Cecilia's, or of St. Mary's in Cosmedin. And often in some quiet little church there are on the station-day very elaborate vespers, which, if you are curious in such things, you may like to hear. Here and there, even in the midst of Lent, are interposed festivals on which the most conscientious Romanist may relax his austerity; such as that of St. Joseph, on the 19th of March—a day celebrated, among other things, by vast preparation and consumption of fritters, which Mr. Story derives from a festival of Bacchus at the same season of the year. And on the 25th of March—the Annunciation—there is the fair of Grotta Ferrata, to which all English Rome pours forth across the wide Campagna. Such a crowd one seldom sees! Country people in all sorts of picturesque varieties of dress—which are the professed object of our visit to the fair; booths with all sorts of things for sale that can enter into the rustic list of wants or luxuries—clothing, male and female—boots, shoes, hats; cutlery, combs, kitchen utensils, so much more scientific than our own, that English housekeepers of far higher condition than the customers of Grotta Ferrata might well covet them; jewellery not quite equal to Signor Castellani's workmanship, and other articles of personal adornment; hams and huge sausages for store, and for present consumption, enormous roast pigs, stuffed with chesnuts and garlic, baskets on baskets of coloured eggs, and appetising fries of fish and other materials, such as Mr. Story often dwells on with delight (i. 90). With difficulty you make your way into the conventual church, where, under the penitent Otho III., about the year 1000, the Greek liturgy of St. Basil was established by the Calabrian hermit St. Nilus; you admire the beautifully-preserved frescoes in which Domeni-

chino

chino has represented scenes from the life of the founder ; and, after elbowing your way back to your carriage (perhaps with the loss of your purse), you are driven to Frascati, from which you climb the heights of Tusculum, pic-nic, perhaps, among the remains of the beautiful little ancient theatre, and return to Rome amidst a multitude of vehicles in the cool of the evening.

As Easter approaches, the ecclesiastical gaieties become more formidable. If any one should suppose the Holy Week to be a time for solemnly collecting the thoughts by way of preparation for Easter, he will find himself utterly mistaken. From Palm-Sunday onwards there is a continual succession of shows, and even those who in their own persons keep out of them as much as possible find themselves constantly beset by the bustle of their friends around them. 'What is there that I can see this morning? what in the forenoon, what in the afternoon, what in the evening, what at midnight? How many places can I be in at once? What is the hour of everything, and how long must I be ready before?' Such are the questions which are heard on every side. It is to be hoped that for the devout members of the Roman Church the ceremonies of the season serve to their proper purpose ; but for those who can look on them only from the outside they are merely a distraction, of which the effect is anything but good. The scenes of crushing and confusion are terrible, and the impression made by ceremonies witnessed under such difficulties must be the very reverse of edifying.

It is a great relief to quiet people when the Easter ceremonies are wound up by the illumination of St. Peter's ; and then the crowds which for the last fortnight had filled the hotels, the lodgings, and the streets of Rome begin to disperse very rapidly. In a few weeks there is hardly an Englishman to be seen in the whole place ; but it is just then, according to Mr. Story, that the pleasantest time of the Roman year begins :—

'The month of May is the culmination of the spring and the season of seasons at Rome. No wonder that foreigners who have come when winter sets in, and take wing before April shows her sky, sometimes growl at the weather, and ask if this is the beautiful Italian clime. They have simply selected the rainy season for their visit ; and one cannot expect to have sun the whole year through, without intermission. Where will they find more sun in the same season ; where will they find milder and softer air? Even in the middle of winter, days, and sometimes weeks, descend, as it were, from heaven to fill the soul with delight ; and a lovely day in Rome is lovelier than under any other sky on earth. But, just when foreigners go away in crowds, the weather is settling into the perfection of spring, and then it is that Rome is most charming. The rains are over, the sun is a daily blessing, all Nature is bursting into leaf and flower, and one may spend

spend days on the Campagna without fear of colds and fever. Stay in Rome during May, if you wish to feel its beauty.

'The best rule for a traveller who desires to enjoy the charms of every clime would be to go to the North in the winter, and to the South in the spring and summer.'—i. 162-8.

The recommendation contained in these last lines is rather more than we are disposed to follow. But in truth, May is delightful everywhere,—in London and in the English country, for instance,—as well as at Rome; and it is not from weariness of Rome that people leave it when May is at hand, but because other places then put forth their attractions. And when all one's friends are gone, what is a sojourner whose happiness in some degree depends on human society to do? But Mr. Story luxuriates (as well he may) in this month at Rome; and, besides the charms of nature, there are then sights which are not to be seen at any other time—among them the Corpus-Domini procession, when all the clergy, monks, and seminarists of Rome repair to St. Peter's, and make the circuit of the Piazza; the well-known flower festival of Genzano; and the artists' festival, a very quaint and characteristic celebration outside the walls, which our author describes with great enthusiasm (i. 172-7).

There is, indeed, the fear of danger to health if the stay at Rome be protracted into the hot season. But against such danger Mr. Story undertakes to secure us, if we will but follow his directions, which, in sum, amount to this:—Imitate the Italians: eat little; drink little, and that not of a strong or fiery kind; and, above all, avoid overheating yourself and exposing yourself to chills (i. 158-9).

There is a chapter on games,—*morra*, the ancient *micare digitis*, which is so often to be witnessed about the Forum; *pallone*, which Mr. Story prefers to cricket, and for skill in which a Florentine, who got the name of *Earthquake*, is celebrated in an epitaph which will put to shame anything that can be inscribed on the proposed monument to the great cricketer, Alfred Mynn.\* And from these and other games of strength or skill, we pass to an account of the Lottery—that institution which plays so large a part in Italian life.

We pass on to the chapter on 'Cafés and Theatres.' The untraveller would hardly understand from this how inferior the Roman cafés are to those of other great cities; but on the subject of theatres Mr. Story has more to say. He knows them all, high and low, from the chief opera-house, the Apollo, to the

\* 'Josephus Barnius, Petiolensis, vir in jactando reperiendoque folle singularis, qui ob robur ingens maximamque artis peritiam, et collutores ubique devictos, Terraemotus formidabili cognomento dictus est.'—i. 118.

humblest gaffs (as we believe they would be called in London), and the puppet-shows. The most striking of all, from its associations and its peculiarities, is the 'Correa,' which is nothing less than the mausoleum of Augustus. There, within the still grand and imposing ruins of Imperial pomp, when the evening sun throws over the whole area the cool shadow of the lofty walls, you may for sevenpence-half-penny take your chair under the bright sky, and smoke your cigar at your ease, while you witness plays very fairly acted on a stage open to the day.

. 'The Italians at the theatre are like children. The scene represented on the stage is real to them. They sympathize with the hero and heroine, detest the villain, and identify the actor with the character he plays. They applaud the noble sentiments and murmur at the bad. When Othello calls Iago "honest" there is a groan over the whole house, and whenever Iago makes his entrance a movement of detestation is perceptible among the audience. Scarcely will they sit quietly in their seats when he kneels with Othello to vow his "wit, hands, heart to wronged Othello's service," but openly cry out against him. I have even heard them in a minor theatre hiss an actor who represented a melodramatic Barbarossa who maltreated the Italians, giving vent to their indignation by such loud vociferation that the poor actor was forced to apologize by deprecatory gestures, and recall to their minds the fact that he was acting a part. So openly is the sympathy of the audience expressed that it is sometimes difficult to induce an actor to take the villain's rôle.'—i. 208.

But there are other theatricals in Rome with which Mr. Story is probably not acquainted. At most of the colleges there are dramatic performances during the Carnival,—generally on some subject from Scripture, or from the lives of the Saints. The performances at the English College, however, are of a different kind, and are very well worth seeing. This year 'The Heir-at-Law' was acted with much humour and effect, although Lady Duberly and Cicely Homespun had been forced to yield to the rule which excludes female characters from the ecclesiastical stage, and, on the same principle, the audience was without any mixture of ladies. Then came a burlesque operetta on the captivity of Richard I. In this the composer and his fellow-students acted and sang with great spirit; and the performances were wound up with a farce.

Another kind of ecclesiastical drama is the Oratorio. Few, probably, among the thousands who frequent the performance of the pieces so styled in Exeter Hall are aware that the name is derived from a source so abhorred by all sound Protestants as the brotherhood of the Oratory, which reckons as one of its most eminent members the redoubtable Dr. Newman. But so it really is;



is; for the performance of musical dramas on sacred subjects was one of the means which St. Philip Neri, the founder of the Oratorians, devised for bringing religion to bear on the people; and oratorios are still performed on the evenings of the Sundays of Lent, in a chapel attached to the Chiesa Nuova, the headquarters of the order. Admission is free, and the audience is very miscellaneous; the more distinguished part of the company (which perhaps includes even princes of the church) being seated in galleries at the opposite ends of the building. Formerly, men only were admissible; but in consequence, we believe, of the French occupation of Rome, a change has been introduced in this respect, and the character of 'Signora Inglese' will now serve as a passport to a gallery which is reserved for ladies. There is very little light either in the body of the chapel or in the galleries; but when the performance is about to begin, those who understand the ways of the place draw out and light their little tapers, by the help of which each man is able to follow the action in his *libretto*.

The oratorio of last spring was a new one, relating to the history of St. Athanasius. It opened with a chorus of orthodox Alexandrians extolling the virtues of their great bishop, to which a chorus of Arians replied that Athanasius was no better than he should be, and that, in Dogberry's phrase, it would 'go near to be thought so shortly.' Athanasius then appears, and receives from Arsenius a flourishing account of the Ethiopian mission under Frumentius, which he resolves to strengthen by sending forth additional clergy. The Arian bishop, George, relates the ignominious failure of one of his schemes against Athanasius, but resolves to overthrow him by some other means; and the rest of the drama is taken up with the well-known story of the manner in which Athanasius, when accused of having murdered Arsenius, and having used his hand for magical purposes, discomfited his enemies by producing the man alive, and with all his limbs entire.

To the class of ecclesiastical dramas may also be referred the 'Dialogo' of the City Mission (*Missione Urbana*), of which some account may be found in Mr. Burgon's curious and instructive 'Letters from Rome.' This performance takes place on Sundays, two hours before the *Ave Maria*, and goes the round of certain churches which are mentioned in the *Diario Romano*, being carried on in each during the Sundays of one month at a time. The performers are two Jesuits, who take their places on a raised platform—the one personating an *Ignorante*, who is made the mouthpiece of all the popular arguments against religion, while the other, a *Dotto*, or learned man, triumphantly answers him.

him. The *Ignorante* speaks the common Roman dialect, and from this cause, and the rapidity of his utterance, is rather hard for a foreigner to understand; but the cleverness with which his talk is suited to the hearers is sufficiently evidenced by the bursts of laughter which he continually calls forth. On the first occasion when we were present at the 'Dialogue,' the Dotto was an old man, with a very loud voice, and of very decided opinions. The *Ignorante* began,—'Last week, father, you told me that, in order to salvation, we must hold the Catholic faith. If we do this, I suppose we need not trouble ourselves about anything further.' 'Far from it,' replies the Dotto; 'you must also observe the Christian law; you must love all men, live honestly, give alms, &c.' 'But,' objects the *Ignorante*, 'people who are not Catholics do these things.' 'You don't understand the matter,' rejoins the Learned Man; 'the almsgiving of a Protestant is no true charity. A Protestant gives alms to a person because she is pretty, or for some other such reason. The charity of Protestants is like the charity of brute beasts towards their kind; it comes from no true motive, and can tend to no good end.' After going on for some time in this strain, the old gentleman turned in a very marked way towards the only two Englishmen who were in the church—conspicuous, probably, by their better dress, as it was in a poor neighbourhood, and on a wet afternoon in January—and broke out into a violent tirade against Protestantism in general, which he charged with insidiously attempting to sap the faith of true believers; and he denounced the most dreadful doom against all Protestants—greatly to the amusement of some little boys and girls, who turned round and laughed in the faces of the persons denounced. On another day the same old gentleman was found raving against excommunicates, and hinting that everybody in the kingdom of Italy was or ought to be excommunicate. On a third occasion, when the audience was generally of a higher class, the *Ignorante* was the same as before, but the violent old gentleman's place was taken by a younger and very acute-looking Dotto, who met the *Ignorante's* humour in his own style. The Dialogue was always listened to with great attention, and must probably be found very useful as an instrument of popular instruction. But we need not say that such performances would be utterly out of keeping with the decorum which the Church of England wisely preserves in dealing with holy things.

From modern theatres Mr. Story passes to the Colosseum. His description of it in its present state is well done; but this chapter is the first considerable specimen of the sort of matter which we have already objected to as out of place, and which, unhappily,

unhappily, fills a very large part of the rest of the work. In such a book as 'Roba di Roma' professes to be, we do not expect to meet with a solemn history of the Colosseum—of its building and of its decay (for the best account of which we may refer to Lord Broughton's 'Illustrations of Childe Harold,' or to his later work on Italy);\* we do not expect to meet with details about the gladiators and their fights, about combats with wild beasts, *mirmilli*, *retiarii*, and all the rest of it.

The next chapter, the account of Pasquin and Pasquinades, contains little beyond what is familiar to the readers of Murray;† but the description of puppet-shows is in Mr. Story's better style, and we wish that we could find room for some part of it.

We are now supposed to have reached summer, when all who can afford it go into the country. Of country life at this season Mr. Story gives us very pleasant sketches:—

'The *villeggiatura* in Rome differs much from the country life in England. It is not the habit here to keep open house or to receive friends within one's household on long visits. The family generally lives by itself, in the most retired manner. There is, however, no lack of society, which is cordial and informal in its character. If the villa belong to a princely house, or be the principal *palazzo* in a small town, there is generally a reunion of the chief personages of the village every evening in its *salons*—the bishop, physician, curate, *sindaco* and *avvocato* meeting there nightly to discuss the affairs of the place and the prospects of the harvest, or to play cards. If there be several families in contiguous houses, the intercourse between them is constant. Visits are made to and fro, little excursions and picnics are formed, and now and then there are rustic dances, to which the *contadini* are invited, when the princes and peasants dance together and enjoy themselves in a *naïve* and familiar way. Several of these I remember with much pleasure that took place during a delightful *villeggiatura* I once made in Castel Gandolfo. On these occasions the brick floor of the great hall was well watered and cleanly swept, and the prettiest girls among the neighbouring *contadini* came with their lovers, all arrayed in the beautiful Albanese costume, and glittering with golden necklaces and earrings. A barrel of wine was set in one corner of the hall, and a large tray, covered with *giambelle* and glasses, stood beside it, where any one who wished helped himself. The principal families in the vicinity were also present, some in Albanese dress, and all distinctions of position and wealth and title were set aside. The village band made excellent music, and we danced toge-

\* Italy: Remarks made on several Visits. London, 1861. Mr. Story's learning on the subject seems to be chiefly taken from Lord Broughton.

† The latest production of the Pasquinesque kind with which we are acquainted is the following, by a well-known Queen's Counsel:—

'A Gallis Romam servaverat anser; ab ipais  
Romanis Romam Gallica servat avis.'

ther polkas, waltzes, quadrilles, and the Roman *saltarello*. These dances took place in the afternoon, commencing at about five o'clock and ending at nine, when we all broke up.'—i. 291-2.

Again :—

' The *grilli* now begin to trill in the grass, and the hedges are alive with fire-flies. From the ilex groves and the gardens nightingales sing until the middle of July ; and all summer long glow-worms show their green emerald splendour on the grey walls, and from under the roadside vines. In the distance you hear the laugh of girls, the song of wandering promenaders, and the burr of distant tambourines, where they are dancing the *saltarello*. The *civetta* hoots from the old tombs, the *barbighiano* answers from the crumbling ruins, and the plaintive, monotonous *ciou* owls call to each other across the vales. The moonlight lies in great still sheets of splendour in the piazza, and the shadows of the houses are cut sharply out in it, like blocks of black marble. The polished leaves of the laurel twinkle in its beams and rustle as the wind sifts through them. Above, the sky is soft and tender : great, near, palpitant stars flash on you their changeful splendour of emerald, topaz, and ruby. The Milky Way streams like a delicate torn veil over the heavens. The villa fronts whiten in the moonlight among the gray smoke-like olives that crowd the slopes. Vines wave from the old towers and walls, and from their shadow comes a song to the accompaniment of a guitar : it is a tenor voice, singing "*Non ti scordar, non ti scordar di me.*"'—i. 297.

Harvest follows (i. 299), and after harvest the vintage :—

' In we go among the vines. There are scores of picturesque peasants plucking grapes, with laughter and jest, and heaping them into deep baskets, till their purple bunches loll over the edge moist with juice. Some are mounted on ladders to reach the highest—some on foot below gathering the lowest—and the heavy luscious buckets, as soon as they are filled, are borne off on the head to a great basket wain, into which they are all tumbled together. The very oxen themselves seem to enjoy it, as they stand there among the vines decorated with ribbons, and waiting to bear home their sunny freight of grapes. The dogs bark, the girls laugh and slip out of the arm of the swains, who threaten them with a kiss. Stalwart creatures they are too, and able enough to guard themselves ; and the smack of their hand on his cheek or back I willingly yield to him, though he takes the practical reproof with a good-natured laugh, and is ready to try his luck again when a chance offers.

' When the grapes are all gathered they are heaped into great stone vats, and, crowned with vine leaves, the peasants, bare-legged to their thighs, leap into them, and with joke and song tread down the grapes, whose rich juice runs out below into a great butt. As they crush them down new heaps are emptied in, and it is no small exercise to keep them under. The juice spurts over them and stains them crimson—the perspiration streams from their forehead—they pant  
with

with excitement, and as they brush away their wet hair they streak their faces with purple. When one is wearied out by this fatiguing work another takes his place, and so the dance goes on until the beat of the juice is expressed. The skins are then subjected to the wooden press, which gives a second and ordinary quality of wine, and water is frequently poured over them as they dry.'—i. 303-4.

The grapes, says Mr. Story, are delicious; but although the vines are well cultivated, the wine is spoilt through want of care in the making. 'No pains are taken in the selection and distribution of the grapes, so as to obtain different qualities of wine; but good and bad, stems and all, are cast pell-mell into one great vat, and the result of course is a wine far inferior to that which may be produced' (i. 306). Let us hope that in this, as in many other ways, we shall soon see a reform by which Italy may do justice to herself.

The Campagna is described by Mr. Story with great enthusiasm. 'To me,' he says, 'it seems the most beautiful and the most touching in its interest of all the places I have ever seen; but there are those who look with different eyes.' Not only did a Frenchman of Mr. Story's acquaintance style it 'un pays détestable,' but 'we also—we English and Americans—but too often call the Campagna by bad names, and speak of it as desolate and deserted, if not ugly' (i. 325). Mr. Merivale, for instance (whose great work seems to be unknown to our author), calls it 'the most awful image of death in the bosom of life anywhere to be witnessed.'\* If this phrase relates to the frequent appearance of ruins in the Campagna, or to the scantiness of its population, or to the malaria which renders it unwholesome for residence, we can only say that the language is a little too solemn. But if Mr. Merivale means to convey the idea that the Campagna has a stricken look, we are quite unable to agree with him. Perhaps Mr. Merivale's impressions may have been received in winter, when the Campagna, like everything else, is at its worst. But in spring its appearance is remarkably cheerful. Far from being an uniform flat—as it appears to the eye looking across it from a height to the grand background of the Sabine and the Alban mountains—it is full of undulations, and has its quiet green valleys, each animated by its little stream, with overhanging willows and alders, which might be in some pastoral district of England or of Scotland. Much of it is already cultivated, and cultivation is spreading, although the system on which the land is let is unfavourable to the progress of agriculture, and in everything relating to implements, and the like, the Campagna

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\* 'Hist. of the Romans under the Empire,' iv. 479.

farmers of the present day are considerably behind those of the reign of Augustus (i. 325-333).

The ruins of the Campagna lead Mr. Story to discuss the population of Rome in the Imperial days (i. 343); and this discussion is more fully carried out in an appendix to the second volume. How little Mr. Story is fitted for treating such questions may appear from the fact that he represents Tacitus as estimating the inhabitants of the city at 'no less than six millions' (i. 343); whereas the historian's statement really relates to the number of *citizens* in the whole empire, as ascertained at the census taken by Claudius.\* It is not for us to enter into such a controversy; but as Mr. Story advocates the old orthodox calculation of four millions, we should have been glad to see how he would dispose of Mr. Merivale's arguments, by which the population of Rome, including the suburbs, and 'making the most liberal allowance for soldiers and strangers,' is reckoned at 'something less than seven hundred thousand.'†

The markets of Rome are the next subject. We have an account of the markets for provisions, for curiosities, and for all other sorts of things. There is an amusing dialogue showing how, if an ignorant John Bull will buy pictures, of which he knows nothing, through the medium of a courier whom he is obliged to use as interpreter, the courier may make a good thing of it by cheating both his master and the vendor who cheats his master (ii. 14-5). But more alarming even than this are some of the details as to what the Romans will eat. Among other things, cat is esteemed as a delicacy; so that those of our countrymen who depend on a *traiteur* for their dinner, may do well to be cautious as to eating 'hare,' which generally appears without the distinguishing head and ears! Here is a picture of the Sunday labour-market in the Piazza Montanara; and let us observe in passing that there is a wonderful contrast between the Sunday of the English quarter and the Sunday of the more purely Roman parts of the city:—

'Every Sunday you will find it thronged with peasants from all the mountain towns in the vicinity, who come down from their homes to labour on the Campagna. As they are generally hired by the week, they return to the city every Sunday to renew their old engagements or enter into new ones. This piazza is one of their chief places of

\* 'Censa sunt civium quinquaginta novem centena octaginta quatuor millia septuaginta duo' (Annal. xi. 25). In his Appendix Mr. Story shows something more like a right understanding of the matter (p. 348).

† Hist. Rom., iv. 521. We may remind our readers that Gibbon estimates the population of Rome at 1,200,000 (iii. 119, ed. 1846), and that his editor, Dean Milman, prefers this estimate both to that of Dureau de la Malle, which is even lower than Mr. Merivale's, and to that of Zumpt—two millions.

resort, and Sunday is their day of 'change. Here they make their petty purchases, transact their small business, make merry together in the *osterias*, lounge about in the streets and sun themselves, and go to the puppet theatres, where there are at least two performances every day. Men, women, and children, in every variety of costume, crowd the place, some with their rude implements of husbandry, some with the family donkey, on which they will return, "ride and tie," to the Campagna towards night-fall, making very picturesque "flights into Egypt" along the road, and some carrying their whole wardrobe on their head in a great bundle. Most of them are stalwart, broad-shouldered, and bronzed with the sun; but here and there may be seen the bleached, saffron face of one who has been stricken down by the fever, and whose smile is pale and ghastly. The men are dressed in home-spun blue cloth, and wear on their legs long white stockings and small-clothes, heavy leathern gaiters strapped up to the knee, or the shaggy skins of white goats. As the cold weather comes on, a huge blue cloak with a cape is flung over the shoulder, and the *contadino*, firm as an old Roman, stands like a statue for hours in the piazza. The women are dressed in the vivid colours of their "*paese*," with scarlet *busti*, and snowy *panni* on their heads, broad-shouldered, full-bosomed, straight-backed, large-waisted, and made to bear and to endure. Their faces beam with health like russet apples glowing in the autumn sun, and the circulation is decidedly good. So, too, is the digestion, if one judges from the appetite with which they eat their raw onions and salads, and bite great curves out of their wedges of black bread.

'At the corner of the piazza, in the open air, with a rickety table before him, on which are a few sheets of paper, and an inkstand, sand, and pens, is the *scrivano* or letter-writer, who makes contracts and writes and reads their letters for them. He is generally an old man, bearded, and with great round iron-rimmed spectacles on his nose.'—ii. 22-3.

The Piazza Montanara is close to the Ghetto, into which Mr. Story plunges with delight. Here, unhappily, he thinks it necessary to display his learning; and, although there is no mention of Sir Thomas Browne's chapter on the opinion 'that Jews stink,' we have an extract to the same purpose from Casalius, in which Mr. Story turns the canonist Balsamon into *Balsamum*; calls the Saracens *Agerini*, instead of *Agareni*; and identifies the Council 'in Trullo' (in the end of the seventh century) with the Council of Sardica (in the middle of the fourth). Nor can we give the praise of accuracy to his account of the Pierleone family, which came out of Judaism in the eleventh century, and produced an anti-Pope in the twelfth.

In the second volume we grieve to say that compilation bears a far greater proportion to original writing than in the first. There is an account of the aqueducts, which seems to belong to  
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some methodical book of topography, rather than to such a sketch-book as this ought to be. There is a chapter entitled 'Good Old Times,' which is, of course, derived from older books, and abounds in such mistakes as Mr. Story delights in when he meddles with history. There is a chapter on 'Saints and Superstitions,' which is not only in great part a compilation, but, even where it treats of modern things, has more to do with other places than with Rome.\* And there is one professedly on 'The Evil Eye,' which runs out into a discussion of all sorts of fascination and magical influences, while as to the 'Evil Eye' itself it gives us very little information. The account of 'Births, Baptisms, Marriages, and Burials' is better worth reading, as being in a greater degree drawn from observation.

We have an account of the great cemetery of San Lorenzo,—our thinking a very unlovely place, although it is no longer disgraced by the abominations which Mr. Story reports from former times. The monuments are generally in wretched taste, both as to design and as to inscriptions; and nothing can be more strongly in contrast with the bare and staring enclosure of San Lorenzo than the deep shadows and the quiet retirement which mark the resting-place of the English and other 'Acattolici,' beside the pyramid of Caius Cestius. There, too, there are things other than could be wished, especially in the older monuments;† but in

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\* We need hardly say that Mr. Story has no toleration for the common legends as to the miracles of saints. But at page 147, in speaking of the late Princess Borghese (Lady Guendoline Talbot), he says:—'Of this beautiful and accomplished woman a remarkable and *well-accredited* story is privately told, which shows that her charities did not end with her life.' And we are required to believe that the Princess, after her burial in St. Mary Major's, appeared, dressed in black, to a poor woman who was praying near the family chapel in that church, asked her why she was weeping, and, on being told the cause, said, 'Be of good comfort; you shall be taken care of; silver and gold have I none, but such as I have I give unto you.' Whereupon she gave her a ring, which Prince Borghese recognized as having been buried with his wife; and the old woman was for the rest of her days pensioned by the Prince!

† As a specimen of the last-century epitaph, we know of nothing more wonderful than the following, which commemorates a very young lady of Roman Catholic family in the English College at Rome:—'Martha Swinburne, born Oct. x. MDCLXVIII, died Sept. viii. MDCLXXVIII. Her years were few, but her life was long and full. She spoke English, French, and Italian, and had made some progress in the Latin tongue; knew the English and Roman Histories, arithmetic, and geography; sang the most difficult music at sight, with one of the finest voices in the world; was a great proficient on the harpsichord; wrote well; danced many sorts of dances with strength and elegance. Her face was beautiful and majestic, her body a perfect model, and all her motions graceful. Her docility and alacrity in doing everything to make her parents happy could only be equalled by her sense and aptitude. With so many perfections, amidst the praises of all persons, from the sovereign down to the beggar in the street, her heart was incapable of vanity. Her beauty and accomplishments were unknown to her. Her beauty and accomplishments were unknown to all beholders, the love of all that enjoyed her



no place of burial that we have ever visited is there so much of beauty, or of touching and soothing influence.

Rome, it is said by those who have known it long, is not improving as a place of sojourn. The influx of English has doubled the price of everything within the last thirty years. A great part of the visitors go to Rome, not for its own sake, but for the sake of what they might find better at Brighton: the English society is broken up into various sets, and is not so free from the spirit of clique, with its foolish little assumptions and jealousies, as in former days. But these are evils which must be endured, even if, as seems probable, they should increase in proportion to the greater facilities of travelling which are now in progress. Notwithstanding all the drawbacks that can be occasioned by the faults either of the natives or of our own countrymen, Rome, with its antiquities and history, its grand natural position, its churches, palaces, galleries and studios, its splendid pomps, and its strange medley of life, so unlike all other life in this nineteenth century, is the most interesting city in the world; and every book which enables us to understand it better deserves a hearty welcome. In how far Mr. Story's volumes fulfil this purpose—in how far, by aiming at too much, they fail of it—we have endeavoured honestly to point out. His opinions are such, and the expression of them is so strong, that '*Roba di Roma*' is not likely to find indulgence at the hands of the censors, so as to be procurable in the Roman bookshops. At present it is a good deal too bulky; but if Mr. Story, by sacrificing what is superfluous, will reduce it to one compact volume, it will well deserve a corner in the traveller's coat-pocket, while the rest of his select little library is undergoing the awful ordeal of the custom-house.

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her company. Think, then, what the pangs of her wretched parents must be at so cruel a separation. Their only comfort is in the certitude of her being completely happy, beyond the reach of pain, and for ever freed from the miseries of this life. She can never feel the torments they endure for the loss of a beloved child. Blame them not for indulging an innocent pride in transmitting her memory to posterity, as an honour to her family and to her native country, England. Let this plain character, penned by her disconsolate father, claim a tear of pity from every eye that peruses it.'

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- ART. IX.—1. *Address delivered at the Anniversary Meeting of the Royal Geographical Society of London, 1863.* By Sir Roderick I. Murchison, K.C.B., President. London, 1863.
2. *Map of the Route explored by Captains Speke and Grant, from Zanzibar to Egypt, showing the Outfall of the Nile from the Victoria Nyanza (Lake) and the various Negro Territories discovered by them.* London, 1863.
3. *Who discovered the Sources of the Nile?* By Charles T. Beke, Ph.D., F.S.A., F.R.G.S., &c. London, 1863.

THE great problem which has perplexed the learned of all ages from the days of Sesostriis, and even from an earlier period—for it is referred to in the hieroglyphics of Egypt;—which the earliest of historians and the most learned of geographers vainly strove to fathom; which Alexander the Great was never weary of discussing; which tempted Julius Cæsar to spend nights and days with the Egyptian priests, striving to acquire from them the information which they did not possess; which Napoleon left unsolved, notwithstanding his passion for scientific as for military conquests; and which in modern days baffled the enterprise of Mohammed Ali;—this perplexing mystery, which has maintained its interest unimpaired almost from the commencement of civilisation in the East, has at length been dispelled by two British officers, who have acquired for themselves a world-wide celebrity, reflecting at the same time honour on their country, and giving one of its prominent features to the age in which they live.

In a former article on African Discovery,\* we remarked that the region yet unexplored, in which the true sources of the Nile must lie, had become so circumscribed that there was every reason to expect a speedy solution of the problem. The furthest point which had then been reached on the White Nile, by ascending its course, was about  $3\frac{1}{2}^{\circ}$  N. lat., by Signor Miani, a Venetian, who had resided for some time in Egypt, and who believed that he had reached  $2^{\circ}$  N. lat., where he cut his name upon a tree; but Captain Speke, on passing this tree in his homeward journey, found it by observation to be  $3\frac{1}{2}^{\circ}$  N. lat., and therefore about 200 miles from the head waters of the Nile. Captains Burton and Speke, in 1859, worked their way to the north by laborious journeys from Zanzibar, and fell in with the lake Tanganyika. The Nyanza was seen and partially explored only by Captain Speke, who, with remarkable sagacity, immediately arrived at

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\* 'Quarterly Review,' No. 218, p. 496.

the conclusion that in it would be found the source of the Nile. That opinion, unfortunately, was not shared by the chief of the expedition and companion of his labours, who had been prevented by illness from accompanying Captain Speke to the Nyanza; and the enterprise, which had hitherto been attended with remarkable success, terminated at a point of high geographical interest, and at a time when a little farther perseverance would undoubtedly have led to the great discovery of the age, and have conferred on the united names of Burton and Speke, the renown which will now attach to those of Speke and Grant.

Rarely has the scientific world been more aroused than by the brief telegram, 'the Nile settled,' which Sir Roderick Murchison received from Cairo; and the excitement was increased, rather than allayed, as the details transpired from time to time, and the conjecture was converted into certainty that the great river to which Egypt owes its place in history and its civilisation, had been at length proved to have its source in a vast lake more than two degrees south of the Equator, the southern shore of which had only once before been trodden by the foot of an European. Before, however, we notice the particular incidents relating to this great discovery, it may be useful to refer briefly to what had been done both in former and in modern times to solve the great enigma.

But why should the Nile have especially attracted the attention of geographers, and have excited the increasing curiosity of the world? Other grand rivers have failed to interest mankind in anything like the same degree; and when their sources have been discovered, they have caused no emotion beyond that of a passing interest and a calm appreciation of a new fact added to the domain of geographical knowledge. The Nile alone has excited wonder bordering on astonishment, and inspired an interest verging on enthusiasm. It is the one cause of the fertility and former greatness of a country the civilisation of which is of a mysterious antiquity, and intimately associated with the sacred history of our race. Its source was an object of great curiosity in Egypt from the remotest periods. It was a frequent subject of discussion among the learned of all nations, and occasionally considered worthy of attention by the government of Egypt itself. Psammitichus I. organised an expedition for exploring the country in which the river was supposed to have its origin, but it did not penetrate very far into the interior; and in the absence of authentic data for determining the difficult geographical

geographical problem, people not only speculated freely, but often guessed wildly and believed absurdly. Herodotus enumerates in his history the many conjectures made by the Egyptian philosophers respecting the source of the Nile, as well as their explanations of the most remarkable of its phenomena. He was told that the periodical inundation of its banks was caused by the melting of the snows on the Mountains of the Moon; but how, he observes, can the river be swollen by melted snows, running as it does from the hottest regions of the world, where rain and frost are unknown? Recent discoveries, however, have ascertained that there are mountains of great elevation near to the Equator which are covered with eternal snow. But we have at present no reason to think that the streams and torrents which flow from the precipitous sides of Kenia and Kilimanjaro contribute any quantity of water to the grand reservoir of the Nile. The great volume of the water of the Nile is undoubtedly due to the rain which falls in the equatorial regions of Africa. With respect to the actual sources of the Great River, Herodotus says he had found no one among all with whom he had conversed, whether Egyptians, Libyans, or Greeks, who professed to have any knowledge of them whatever except one person, namely, the scribe who kept the register of the sacred treasures of Minerva in the city of Sala; but even he did not seem to be in earnest when he said that he knew them perfectly. His story was, that between Syéné, a city of the Thebais, and Elephantiné, were two hills with sharp conical tops, the name of one being Crophî, and that of the other Mophî, and that midway between them were to be seen the fountains of the Nile, which it was impossible to fathom. The fountains were known to be unfathomable, he declares, because Psammitichus had made trial of them, and had caused a rope to be made many fathoms in length, and had sounded the fountain with it, but could find no bottom; from which Herodotus, evidently more than half-believing the story, infers that there probably existed certain strong eddies, owing to which the water dashed against the mountains, and that by reason of these eddies a sounding-line could not get to the bottom. The Egyptian was evidently practising on the credulity of the inquisitive traveller, and doubtless smiled at his simplicity when he saw him recording, with his habitual care and accuracy, the names of mountains which had no existence whatever but in the imagination of the learned scribe, whom Herodotus probably rewarded for supplying him with such an important addition to his geographical knowledge.

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The Nile was known, Herodotus says, to the extent of four months' journey, either by land or by water, above the Egyptian boundary, and there the course of the river was from west to east; but beyond that point no one possessed any certain knowledge of it, as the country was uninhabitable by reason of its excessive heat. The Bahr el Abiad, or the White River, the largest and longest of the streams, is now acknowledged to be the Nile, although the Bahr el Azrek, or Blue River, which flows from the highlands of Abyssinia and the source of which is well known, long had its advocates. The remaining branch, or the Atbara, flowing from the east, is of less importance than the two others. All these branches were well known to Ptolemy, who flourished at Alexandria about A.D. 150. This geographer seems always to have considered the western river as the true Nile; and it is remarkable, as a proof either of the possession of some more accurate knowledge than any which has descended to modern times, or as a correct inference from the observed phenomena, that he places the sources of the western river in numerous lakes lying at the base of the Mountains of the Moon. Strabo also mentions lakes from which the Nile issues in the east, but Sir Gardner Wilkinson\* identifies these lakes, as well as the large lake Pseboa, above Meroë, with the modern Dembea, in Abyssinia, from or through which the Blue Nile runs.

The proofs which Ptolemy has given that he was well informed on the hydrography of at least two of the branches of the Nile, have always been thought to render his opinion of the origin of the western branch, or the White Nile, well worthy of consideration. In conjecturing the White Nile to be the true Nile, he agrees with Herodotus. About 200 B.C. Eratosthenes, the learned librarian of Alexandria, possessed almost as correct a knowledge of the course of the river as any that has been attained by modern explorers until within the last few years. He agrees with Ptolemy in placing great lakes at the head of the two principal branches of the Nile; and, as his knowledge proved to be correct with respect to the Blue Nile, there was reason for supposing that it might prove equally correct as to the White Nile. A remarkable fact has recently been brought to light, proving that a far more accurate knowledge of the hydrography of the Nile was possessed by some ancient than by modern geographers. Colonel Sir Henry James lately called the attention of Sir Roderick Murchison to Lelewel's '*Géographie du Moyen Age*,' where

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Rawlinson's Herodotus, vol. ii. p. 43.

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there is a map taken from the Arabian work called 'Rasm,' which map was copied by Abu Diafar Mohammed Ben Musa, A.D. 883. This map is, therefore, 1000 years old, and on it the source of the Nile is represented as being in a lake called Kura Kavar, situated on the Equator, an island in it being represented as in longitude  $30^{\circ} 40'$  E. This exactly agrees with modern discoveries.

Reference was made in a recent number of the 'Journal of the Royal Geographical Society' to a passage of Seneca,\* in which that writer relates a conversation which he had with two centurions, who, in the early part of the reign of Nero, had been sent to search for the sources of the Nile. With the assistance of the King of Ethiopia and other chiefs, they, he says, to a great extent accomplished their task; but their further progress by water was found impracticable, when they reached the great jungles or marshes (*immensas paludes*), perhaps the Bahr el Ghazal, in which only a canoe containing one person could float. Seneca's further account of certain rocks out of or from between which the river was said to fall with great force is remarkable. He may either refer to the imaginary mountains which Herodotus mentions, or to the rush of the great stream from the Lake Nyanza, or from some point in its course of sufficient importance to justify partially if not entirely the imperfect description which he gives.

The principal modern explorations of the Nile have been that by Bruce, who confidently asserted and believed he had proved the Blue Nile to be the Great River of Egypt, and whose inquiries in the country of Darfur led him to place the source of the river at about  $7^{\circ}$  N. lat. and  $27^{\circ}$  long., not however in lakes, but in some stream flowing from the Djebel-el-Kamar, or Mountains of the Moon, the name which was given by Ptolemy to the great range in which he affirmed that the true source of the Nile would be found;—one by Linant, who travelled on behalf of the African Association in 1827, and surveyed the course of the White Nile from its confluence with the Blue River to Aleis, a distance of 132 geographical miles;—several modern expeditions, one under the direction of Ibrahim Kashef, an officer of the Viceroy of Egypt, who departed from Khartum, and dividing his party marched for thirty-four days along both banks of the White River without making any considerable progress or discoveries. Between the years 1839 and 1843, three expeditions were fitted out by the Egyptian Government for the exploration of the Nile,

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\* Nat. Quest., Lib. 6.

and by which the river was followed up into regions previously unknown to the modern world. The first of these expeditions ascended the river as far as  $6^{\circ} 30'$  N. lat., discovering in its passage the mouth of the Sobat, Lake No, and the Bahr el Ghazal; the second is alleged to have reached  $4^{\circ} 42'$  N. lat.; the third did not get so far. The second of these expeditions was the most important. The officer in command was so much impressed by the appearance and magnitude of the Bahr el Ghazal that he would certainly have proceeded to explore that remarkable piece of water in preference to the Tubiri, conceiving it entitled by its importance to be considered the true Nile, rather than the river up which he continued his course; but his instructions were imperative to pursue his explorations to the south, whereas the Bahr el Ghazal would have taken him to the west or south-west.

Linant with a party of natives ascended the river as far as  $13^{\circ} 43'$  N. lat., but was unable to proceed in consequence of the native wars. The description which was given him of the country agrees with that which has since been derived from personal observation. The stream of the Nile was represented as being frequently lost in extensive lakes lying far to the west, and communicating with each other during the periodical inundations, the intervening country being flat. The observations which he himself made confirmed the truth of the description which he received. There was a total absence of gravel and sand in the bed of the river, which negatived the supposition that it could be fed by mountain streams; and its shoals and flats being composed of fine clay,\* Linant concluded that it could not issue direct from any lofty region; or if its true source should really be in the Mountains of the Moon, it flowed after leaving them through a great extent of level country. One of the phenomena which it presented led him to the conclusion that it issued from or passed through some large lake; prodigious quantities of fish were observed carried down with the stream at the commencement of the freshes, and Linant rightly inferred that they could only come from a lake, from which they escaped as soon as the rains and the annual inundation set in.

The position of the Nyanza had been imperfectly indicated to Captain Speke by the Arabs whom he met at Kazé, on his first

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\* The only sand in the White Nile is not brought down by the river, but blown there from the interior by the south-west winds.

visit to the country. It was found to be separated from the Tanganyika by only 200 miles. The southern extremity was observed to be in  $2^{\circ} 30'$  S. lat., and its breadth there about ninety miles. It was fed by numerous streams which flowed from the mountain range which divided it from the Tanganyika, as well as by others, and by marshy rivulets which, supersaturated with water in the rainy season, overflow their banks and pour their contents into the lake. The existence of these great lakes in the interior of Africa had often been remarked upon by Sir Roderick Murchison, in his Addresses to the Royal Geographical Society; and he intimated the probability 'that the true centre of Africa is a great elevated watery basin, often abounding in rich lands, its large lakes being fed by numerous streams from adjacent ridges, and its waters escaping to the sea by fissures and depressions in the higher surrounding lands.' And here we cannot but express our satisfaction that the statements of the two enterprising German missionaries Krapf and Rebmann, which were received with so much suspicion, relative to the existence of great mountains covered with snow in this region of Africa, have been completely confirmed by the subsequent explorations of Baron C. von Decken and Mr. Richard Thornton, the former of whom ascended Kilimanjaro to the height of 13,000 feet to the snow-line. The rains at the Equator can scarcely be said ever to cease, but it is in April and November that they are heaviest. It is certainly a most beneficent arrangement that the configuration of Central Africa should be such as to cause the periodical expansion of its rivers into broad but shallow lakes, thereby supplying a great amount of moisture to the atmosphere, without which, in such a region, there could have been no organic life; equatorial Africa would otherwise, instead of a terrestrial paradise covered with a rich and luxuriant vegetation, and the home of millions of the human family reveling in material abundance and animal enjoyment, have been a scorched wilderness in which it would have been utterly impossible for man to subsist. The country on the Nyanza was found by Captain Speke, on his first visit, to be not only perfectly healthy, but abounding in all the necessities of life. Coffee, the banana, numerous oleaginous plants, the pine apple, the ground-nut and cocoa-nut, rice, the cotton plant, were successfully cultivated, and the hills were covered with herds of fine cattle. During his first visit to the lake, Captain Speke received vague accounts of the Kitangulé and Kitonga, rivers flowing into it. A third large river to the north was described to him;



him; it was said to be broader, deeper, and stronger than either the Kitangulé or the Kitonga, and to flow from the lake through stony, hilly ground in a north-westerly direction. This is doubtless the great river which Captain Speke has now seen, which the natives call the Kivira, and which he confidently denominates the Nile; and the hilly ground is the sandstone range which he describes as a characteristic feature of the scenery to the north-west of the lake. The conviction flashed upon his mind very soon after he had quitted the vicinity that this river must be the Nile. The height of the Nyanza having been ascertained to be upwards of 3500 feet above the level of the sea, and the bed of the Nile at Gondokoro, in latitude nearly  $5^{\circ}$  N., being greatly lower, Captain Speke arrived at the conclusion that the lake must be the reservoir of the Nile, and he conjectured that the cause why the ancient and modern exploring expeditions had failed to discover the Nyanza, was the existence of impassable rapids occasioned by the difference of elevation between the lake and Gondokoro. The intermediate country, Captain Speke inferred, was terraced like a hanging garden. He has since found its conformation to correspond precisely with that impression; and it is worthy of remark that the independent observations of travellers in Southern and Western Africa similarly reveal to us the existence of great rivers descending by steps from some central plateau.

The public will look forward with eager curiosity for the full details of Captain Speke's last great exploit and adventures, with a few of which he has already gratified his numerous audiences, who have listened at the cost of much bodily discomfort. It appears that returning to Unyanyembi, about  $3^{\circ}$  south of the Victoria Nyanza, and his former starting point, he and his companion took a new direction, which they were informed would conduct them to a creek on the western shore of the lake, whereas Captain Speke's first acquaintance with it was made nearly at its southern extremity. The track, however, did not lead direct to the Nyanza, but to a long valley called Orége, sloping down to the Nyanza, and presenting some of the appearances of the bed of a lake fast drying up. Captain Speke conceives the great Nyanza itself to have been formerly twice its present size, the surrounding country being covered with a network of rush-drains with boggy bottoms. But it seems to be the characteristic of several of the great African lakes to be subject to enormous periodical expansion and contraction, according to the amount of rain and evaporation to which they  
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are subjected. Thus the great lake Tchad was found by Dr. Barth to be an immense lagoon, and at the time of his visit to be only sixty miles in extent from east to west, although Clapperton had found it by rough measurement a few years before Barth's visit to be 120 miles long in the same direction. It may be therefore reasonably concluded that most of the lakes in the equatorial region of Africa are the expansions of large rivers swollen by the tropical rains. That is undoubtedly the case with the Tchad, and it may to a great extent be that of the Victoria Nyanza.

The size of the lake, however, must necessarily be much greater in the rainy season than in the dry, and the apparent traces of a great permanent diminution of its area may be only those of its periodical subsidences. It is scarcely conceivable that a lake so situated as the Nyanza, with the sources of its supply, by tropical rains and mountain streams, perennial, can have permanently decreased, to the extent supposed, from the effects of mere evaporation. Captain Speke recorded his first impression of this great sheet of water as being only the temporary deposit of a vast flood overspreading a flat surface. He believed it to be very shallow, as it was far from presenting the usual characteristics of a deep lake or inland sea, like the Tanganyika, but was studded with a multitude of wooded islands standing out of its surface like low hill tops, similar in their configuration to those of the country through which he had passed, and which would have presented exactly the same appearance as the Nyanza if subjected to a temporary inundation.\* The recently discovered smaller lake, called by the travellers 'Little Windermere,' is, it appears, drained by the Kitangulé River into the Nyanza. This river, after receiving the contributions of many smaller streams, and draining some minor lakes, is described as a noble stream, almost equal in volume to the Nile itself when it first issues from the Victoria Nyanza.

Mashondé, in the upper region of the Uganda country, was the spot from which, in his second expedition, Captain Speke first obtained a view of the great lake. There is apparently reason to believe that the Nyanza is connected with some other lakes, for Captain Speke heard from the natives that they were in the practice of going to one in quest of salt by means of a strait, and he conjectures it may be the Baringo of

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\* Captain Speke's former exploration of the country of the Nyanza is recorded in three highly interesting papers contributed by him to 'Blackwood's Magazine,' in 1859.

Dr. Krapf, and which he denominates<sup>d</sup> the Salt Lake, from its islands possessing deposits of salt. In passing along the western shore of the Nyanza, two rivers flowing northwards were met with before he found the great stream which he unhesitatingly proclaims to be the Nile. It is, therefore, from the northern extremity that this great river rushes swiftly from its reservoir, rejoicing as a giant to run its course. The river, soon after it has left the falls, flows through the sandstone hills, to which reference has been before made, and becomes a mountain torrent of great beauty. It then winds sluggishly along a succession of low flats, having less the appearance of a river than of a lake. It is soon increased by two considerable tributaries, and continues its placid course until, in consequence of a rapid fall in the land, it again becomes a foaming torrent. Here Captain Speke quitted the banks for a time. Traversing the chord of a bend which the river describes, he next met with it in the Madi district to the north of the Karuma Falls, where it again presented the aspect of a sluggish stream, alternating with rapids. Before reaching the Madi district, it passes through the Little Luta Nzigé, a considerable lake. This lake, which is thought to be another feeder of the Nile, Mr. Baker, at Captain Speke's suggestion, undertook to explore; and he left Captain Speke for the purpose of pursuing his travels to the south-west, by which he hoped to throw much light upon several collateral questions connected with the supply of the Nile. Here the Asua River, which was represented by the people, with whom Captain Speke conversed, as flowing from the northern end of the Nyanza, joins the Nile, and is during the rains an important feeder of the main stream. Below this point the course of the river is well known, and the Bahr el Ghazal joins it, looking like a lake without any apparent stream of its own. This remarkable sheet of water, which is fed by streams from the east and south, was entered by Mr. Petherick in the course of one of his trading enterprises; but he was prevented from landing on its banks by the hostile attitude of the population. In 1854, however, he succeeded in landing, and in making his way into the interior. The Nile flows past the Bahr el Ghazal with an imposing sweep and velocity.

Of the other principal tributaries to the Nile, the Giraffe River—although its course is at present entirely unknown—is believed to be navigable to a great distance south. The Southern and the Northern Sobat enter from the right bank; and Captain Speke suggests that these three great streams may possibly

possibly be branches of one river further south; and if such should prove on further exploration to be the case, he candidly admits that in its upper course it must be compared with the river which flows from the Nyanza.\*

Independently of the high importance which is justly attributed to the discovery of the great river which issues from the Victoria Nyanza, Captain Speke and his companion have opened up to the civilised world a region of Africa equally interesting to the ethnologist, the geographer, and the philanthropist. The chiefs of several of the black tribes, through whose territories they passed, present a striking contrast to the coarse and brutal populations of the districts which lay in Captain Speke's route on his first visit to the Nyanza. The existence of any people in the equatorial region of Africa, in so comparatively advanced a stage of civilisation as that of Karagwé, on the western side of the Nyanza, ought to modify materially the common opinion of the mental and moral attributes of the African race. A people which, without any intercourse with the civilised world except with a few ivory merchants, could attain, unaided by example and instruction, so much proficiency in some of the simpler arts of life, and display so many of its proprieties and humanities, raises the character of the black men to the level of the white, proving them to be capable of the same refinement of feeling and manners. The character of one native chief and of the princes of his family elicited from Captain Speke the highest eulogy which man can bestow on man. He has characterised them as essentially gentlemen. But it would appear that these chiefs were of a superior race, who wandered probably from Abyssinia and became the rulers over tribes which differ little from the ordinary inhabitants of Africa.

Whether the remote regions to which attention is now directed can be brought within the range of mercantile enterprise, remains to be ascertained. We already hear of the formation of a wealthy and influential public company, which will receive the support of the Viceroy of Egypt, and of which the object will be to

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\* We give the passage referring to these rivers, in the Address delivered by Captain Speke before the Royal Geographical Society :—'The Northern Sobat was passed without our knowledge, which also being navigable would make the Upper Sobat, that is to say, the Sobat above the Delta, of far greater magnitude than the Giraffe, unless indeed these three streams may be one river still further south, when on its combination the comparison would have to be drawn with the Nile above it, and would very nearly equal it, for the Nile with these additions has scarcely doubled its importance, considered as it was seen from above, entering the Bahr el Ghazal.'

open the navigation and extend trade throughout the whole course of the Nile. It is proposed to establish a line of telegraphs and a chain of trading posts as far as Khartum, and to form a line of caravans for penetrating the regions to the south. The impression made on Captain Speke on his first visit to these regions, of their boundless fertility and capabilities, has been fully confirmed. The country is everywhere in a high state of cultivation, and the scenery in many parts strikingly grand. The prevalent principle of government appears to be the despotism of a chief; but the people are described as good-natured, intelligent, honest, and easily ruled. Cannibalism was not found to exist in any of the districts, although the travellers were themselves suspected and accused of it. It was imputed to them that they ate voraciously the flesh of women. The difficulties of travel in these countries are very great; and the frequent wars between the different tribes must for some time make exploration and traffic a work of peril. The navigation of the Nile seems beset with difficulties, which it may require centuries of civilisation to overcome. No direct access by water to the district of the Nyanza can be hoped for, at least by the great river which rushes over the Ripon Falls.

It is remarkable that in scarcely any of the great African rivers is the navigation unobstructed. The Zambezi is not navigable in its upper course, and has some serious obstructions in its lower. The great Orange River, after a course of 1000 miles, enters the sea an insignificant stream. The Couanza is navigable but for a short distance, and that only for small vessels. The Congo possesses a wide and deep embouchure, but at the distance of 100 miles from the sea it leaps over tremendous precipices, and is beset with dangerous rapids and terrible cascades. The Niger in its lower course is open, but its upper course presents many obstructions and difficulties. The Senegal is only navigable for 250 miles from its mouth; and now the Nile, in addition to the well-known difficulties of its lower stream, has been ascertained to have a series of rapids and falls in its highest course which must present insuperable obstacles to its navigation.

The farther researches in this most interesting portion of the globe will probably not be confined to the route just explored by the two energetic and successful travellers who have so much excited our sympathy and our interest. The great tributaries of the Nile now deserve attention. They may flow from regions quite as important and probably as interesting as those with which we  
have

have recently been made acquainted, although their exploration may not be fruitful of such exciting geographical results. It was suggested so far back as 1837 that the most appropriate mode of exploring the Nile and its tributaries would be by means of a small steamer, drawing only two feet of water, and manned by a small but select crew. An expedition, provisioned for a year, leaving Cairo in the month of July, might, with a little care, pass all the cataracts between that place and Khartum, and reach Gondokoro without difficulty.\* For exploring the Nile much above Gondokoro, such an expedition would, we now learn, be unsuitable; but it might be eminently conducive to the prosecution of further geographical discoveries if it should take the direction either of the Sobat, the Giraffe, or the Bahr el Ghazal, and thus be not only the means of greatly enlarging our knowledge of the interior of Africa, but become the harbinger of civilisation to millions yet unknown and unheard-of.

The introduction of steam on the upper waters of the White Nile would not be a novelty. The feat has been already accomplished by three ladies, who, with a spirit and courage which cannot be too highly commended, have not only pushed up the Nile in their little vessel as far as Gondokoro, but have even ventured a day's journey beyond it. They have entered the Sobat, and steamed for some distance up its stream, which they describe as not of great importance, except during the floods. They have gone upon an excursion up the Bahr el Ghazal, by which they hope to make important discoveries relating to streams by which that great 'mere' is fed.

All efforts to ascend the Nile to its source having failed, it is remarkable that no effort should have been made before the expedition of Burton and Speke to reach it from the east. It had several times been suggested that expeditions starting from Zanzibar would have a fairer prospect of reaching the land of mystery than if they proceeded from Egypt. Important discoveries had been made by the German missionaries stationed near the coast, and who took occasional excursions into the interior; and in 1848 Dr. Beke, an able geographer, projected an expedition into the interior from Zanzibar, being convinced that the head-streams of the Nile would certainly be found in the district now known to be drained by the Nyanza. A claim, therefore, has been made by this gentleman to be considered the

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\* 'Journal of the Royal Geographical Society for 1839.'

theoretical

theoretical discoverer of the sources of the Nile, in consequence of having pointed out (after Ptolemy and the Arabian map-maker) the quarter in which they were to be sought. This claim cannot in any degree detract from the merit of Captain Speke in having arrived by fair and independent reasoning at the convictions which prompted him to undertake his last expedition, and in having actually discovered the great reservoir from which the mighty Nile flows.

It would be unjust, while applauding the great achievement of the now illustrious explorers of the source of the Nile, not to refer to the invaluable labours of the Society to which the world has for many years been chiefly indebted for the extension of geographical knowledge. To the Royal Geographical Society of Great Britain is due that increase in our knowledge of the surface of the globe, which has been one of the most marked characteristics of this century. The variety and importance of the subjects brought forward for discussion in this Society, no less than the great ability which marks the Papers contributed to its Journal, and the number of its members, place it very high indeed among our scientific bodies. It is a remarkable coincidence that the eminent man who presides with so much ability over its councils, and contributes so greatly to the interest of its discussions, should also be the geologist who has revealed to us the ancient history of the earth, while in his untiring geographical labours he evinces that his interest is not by any means confined to the deep foundations of our planet, or to the mysterious changes which in remote ages its surface has undergone. African discovery has more especially occupied the attention of the Society, and the name of its founder\* will be connected with the discovery of the mouth of the Niger; the name of its existing President—to whom is mainly due its resuscitation—will be associated with the discovery of the sources of the Nile. His steady aid, combined with the cordial approbation and support afforded by Her Majesty's Government to the successive expeditions, has greatly contributed to the prosecution of African discovery in the South and in the East, and to the achievements of Livingstone and Speke. The noble river which issues from the Victoria Nyanza is, like Hercules in his cradle, a giant born; but its remote springs of life remain yet unvisited by civilised man. The modern world may still say with the Roman

‘*Nec licuit populis parvum te, Nile, videre.*’

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\* The late Sir John Barrow.

Its origin may yet lie hidden among the wilds which have only just emerged from the gloom of unexplored distance; but, tracked by the eager steps of the future explorer, it will reveal more and more of its mysteries; and he will at length slake his thirst in the sparkling rill which is the source of Heaven's blessings to the millions who breathe, and move, and have their habitation along the vast expanse of valley and plain from the long-mythical Mountains of the Moon to the old historic land of Egypt and the sea.

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THE  
QUARTERLY REVIEW.

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- ART. I.—1. *Lives of British Engineers.* By Samuel Smiles.  
3 vols. 8vo. London, 1862.  
2. *Proceedings of the Institute of Civil Engineers, 1842 to 1863.*  
3. *Sir W. Armstrong's Address delivered at the Meeting of the  
British Association at Newcastle, 1863.*

**A**MONG the various definitions which have been proposed, in order to distinguish man from the lower orders of beings, few are more characteristic than that which describes man as a Tool-using animal. Whatever powers other animals exert, or whatever functions they perform, are due to the strength of their teeth, or claws, or to the adaptability of some member, which they inherited with their birth, and which is an essential part of their being. On the other hand, we nowhere find man so uncultivated, that he cannot use a club or spear, and we very rarely find him unable to twist a fibre into a thread, or unable to use a bow and arrow. The latter, in fact, is a tool of no mean complexity, and requires, on the part of the individual using it, longer practice and more skill than need be developed by the man who tends the most complicated machinery in our modern factories, or who guides the gigantic powers of our largest steam-engines. The essential difference is that the tool of the savage is the product of his own hands, and its successful exercise depends on his own individual skill, whilst the factory of the civilised man is the result of the combination of thousands, who have aggregated their experience in inventing it, and united their energies to work it.

There is still another definition which is as characteristic as that just quoted, though it has not yet found its way into books. This would describe man as a Road-making animal;—understanding by this, not the path which an animal wears with its feet as it goes from its lair to the feeding-ground; but those organised means of communication, by land or sea, by which a man seeks to barter the special results of his own industry for those of other men; and which enable every country to interchange its products with those of every other climate and soil.

These two definitions are worthy of far more attention than they have hitherto received, inasmuch as they practically are the foundation of the modern science of engineering.

It may be that we, living in the midst of progress, and being as it were part of the great work, are not aware of the importance of the changes that are taking place through the instrumentality of this, the youngest of the professions; but it is not too much to say, that the invention of the steam-engine, and its application to the various arts and manufactures, are as important to mankind as the invention of the printing-press was some four centuries ago. What printing did for the intercommunication of ideas, and the development of intellectual power, steam is doing in increasing the material well-being of mankind; and in bringing together all the nations of the earth, so that none can now remain much longer strangers to the other—and all may unite for any purpose, good or evil. It is no hyperbole to say that already, within the last hundred years, the engineers have doubled the mechanical power, and more than doubled the productive resources of mankind; and they have reduced the dimensions of the globe, measured by time, to less than one-fourth of what they were in 1763.

India can now be reached in a month; China and Australia, in six weeks; and if a line of steamers were established, *viâ* Panama, a man might go round the world with ease in three months. But these are only the beginnings; we all know that, in a very few years from this time, there will not be an important port on the face of the globe which may not be reached from London in the short space of one month,—and very few with which there will not be telegraphic communication. When all this network is once fairly established, it is impossible that any nation can remain segregated from the rest; and when a thousand millions of human beings come to take an interest in each other's affairs, and can combine to influence one another or to effect any given object, the results must be such as have not yet been dreamt of in our philosophies.

There were of course engineers in all ages of the world, but their efforts were sporadic, and the value of their works depended upon the cleverness of the individual more than upon the advanced state of the science; and it is only within the last one hundred years, that the professors of engineering have attained that organisation without which nothing great can be done. It is only within the same period, and only among the more civilised nations, that people have been prepared to spend the enormous sums of money which have been required to effect the progress that has already been made.

There are still many village communities in not very remote parts of the globe, where the shepherd and husbandman share with the carpenter and blacksmith the produce of the soil, or the  
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result of their skill or industry—microcosms, where men live nearly as unprogressive as the Anthropoids, and little raised above them in intellectual development, living and labouring only to supply their immediate material wants, and dying only to be forgotten.

Among these the engineer has no place; but gradually the stagnant pools of intellectual sleep are being drained, and mankind are being formed into larger masses. In former years this was effected by the rude but ready mode of conquest, or of pilgrimage,—Alexander's glorious raid did more to bring the East and West together, than had been effected by the trade of the Egyptians or Assyrians; and it paved the way for the more systematic conquests of the Romans, who nearly united all the known world into one great empire. When that broke down, as sooner or later all systems based on violence must, it was the Crusades that first awakened Europe from the torpor and isolation of the dark ages; and the pilgrimages to the shrine of St. Peter at Rome, or to the Caaba at Mecca, prevented the two great families of mankind from resolving themselves into a multitude of incoherent atoms. During the last three centuries the tendency has been to combine mankind into a certain number of larger empires; but to define these by strictly marked boundaries, and to prevent intercommunication by custom-house and police regulations. Steam and rail are now tending to sweep away these barriers, and to fuse all the families of the earth together.

This is not the place in which to speculate with the sanguine whether war and international jealousies will cease through this better knowledge and greater familiarity of men with one another, or to attempt to prophesy with the desponding, the greater evils that may arise from this gathering together of the nations. Nothing but a frightful catastrophe, of which we have no suspicion, can now stop the progress of road-making or the development of manufacturing industry. But, accepting that progress and that development as facts, it is well to endeavour to trace how and why the impulse was given, in order that we may more clearly see the direction in which the movement is tending.

The mechanical engineer naturally takes precedence of his road-making brother—in point of time at all events—inasmuch as it requires only one man to make or use a tool, and it requires many to make a road or build a ship; and man's progress in all material or useful arts is measured much more by his power of combination, than by his individual intellectual development. There are besides certain accidental aids placed at man's disposal, which he availed himself of at a very early period. We can

hardly go back to the time when the hunter and the shepherd had not enlisted the dog to assist him in watching his flocks or in capturing game; or even to the time when the patient ox had not lent his assistance to draw the plough and to thrash out the grain. It was only at a much later stage that the less domestic horse was broken in to work for man, though he became, until the invention of steam, the most useful and the most versatile of all the assistant powers which man had borrowed from nature. He not only did all the work that had formerly been performed by the ox, but carried his master in war or the chase, bearing him or his goods on long journeys by land, or dragging waggons or coaches when roads were made, and turning mills for almost every kind of manufacture. Horse-labour, however, is expensive, and horseflesh heir to many of the ills of humanity; so wind and water were early enlisted to assist it—how early we hardly know—on land at least. On water the wind was in very ancient times entrapped to fill the sail and waft the frail bark of the savage across the lake, and afterwards even on the ocean, and it has since the invention of a keel and the increase in the size of ships done an amount of work in the carrying line far greater than could be done by all the horses in existence. On shore, however, its services have been far less readily available. The most obvious way of using it would evidently be to construct a machine like the paddle-wheel of a steam-boat, and encasing one half of it, to allow the wind to act on the other half. This has been frequently tried, but the exposed surface is so small, and the resistance of the enclosed part so great, that practically a sufficient amount of power cannot be obtained without a great expenditure of means, or unless it is blowing a gale of wind. A far more practical mode is the ordinary screw-mill, which is one of the most ingenious inventions of modern times, though when it was invented, or by whom, is by no means clear. We pride ourselves somewhat on the application of the screw to the propulsion of ships, but the employment of the same instrument to turn a mill, was a far more difficult and less obvious problem, the one being the exact converse of the other. In the windmill the passing air acts on the blades of the screw, and its force is transmitted to the circular mill which it works. In the ship the mill turns the screw, and its action in a fluid at rest forces forward the body containing the machine. Nothing can well be more ingenious than this mode of applying the power of wind; but then calm days frequently occur when the work is most wanted; or gales supervene when it is dangerous to loose the sails, and then all connected with the mill must remain idle. Thus uncertainty is the real defect of wind-power, which no ingenuity

ingenuity can overcome, and which will consequently, in spite of its cheapness, always limit its usefulness. Notwithstanding this a great deal of corn is ground in many parts of the world by wind-power, and much water raised in Holland and other low countries by its agency; but it is too uncertain for the great combinations of manufacturing industry, and therefore will probably never be developed to a greater extent than at present; in fact, it may fall into disuse as other powers become cheaper and handier, in consequence of their more regular and consequently more economical application.

If, however, there is no great scope for mechanical ingenuity, and no great power to be obtained from so impalpable and so uncertain an element as wind, water forms a far more stable and more tangible agent for assisting man in his labours. It is uncertain how far the Romans ever used water as a power. If they had mills, they were probably only wheels supported on two boats anchored in the current, such as are seen on the Rhine or Danube at the present day. To throw a dam across a stream, and conduct a regulated quantity of water to a fixed wheel in a house, required a mechanical organisation which the Romans had not apparently reached, and may also have been unsuited to the 'fumaras' of Italy. Very early, however, in the Middle Ages corn-mills became common on the more constant streams of Northern Europe, and soon superseded hand-grinding as completely as the spinning-frame and the power-loom have done away with hand-spinning or weaving in this country. At the present day an immense quantity of hard work is done by water-wheels. Some of vast diameter have been erected where the fall of water is great, and others of great breadth where the stream is heavy and the fall small. Practically almost all our corn is still ground by water-power, and a great deal of forging and many mining operations are carried on with its assistance. The great inconvenience is that in most cases the manufacture must be taken to the power, as local circumstances generally prevent the power being conveyed to the spots most suitable for its application. The convenience of transport and the facility of subsistence generally limit the localities of large centres of manufacturing industry to fertile plains, and in these water-power is seldom available to any great extent.

Recently a new application of water-power has been effected by the inventive genius of Sir W. Armstrong. He first applied it at Newcastle, where the general level of the town is very much above that of the wharves of the harbour, and the waterworks in consequence provided a very tall column of water at the lower levels. Of this he availed himself by applying the pressure so  
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obtained to force a piston along a watertight cylinder, and with a simple multiplying gear the cranes on the quays were made, by the mere turning of a cock, to raise any weight their construction could support. By applying the water-power alternately on both sides of the piston, and acting on a cranked axle—as done in the steam-engine—a water-engine was next invented, capable of exerting any amount of power that could be obtained from the height of the column of water and the amount of supply. When a sufficient head of water is available, or where the work is intermittent, this is certainly one of the most successful applications of water-power yet invented. At Great Grimsby Dock and at Birkenhead pipes are laid under the pavement from a reservoir at the top of a tall tower, to every part of the dock premises. At the foot of every crane, under the piston of every hoist, at every dock-gate, unseen and noiseless the power lies dormant; but a woman's hand applied to a small handle will set in motion a force sufficient to raise a mass weighing fifty or one hundred tons, and either to place it in the hold of a ship, or deposit it in any spot within reach of the arms of the crane. With equal ease the gates of locks one hundred feet in width are opened or shut, and the smallest as well as the heaviest works of the dockyard done without a stranger being able to perceive what it is that sets everything in motion.

As an accumulator of power Bramah's hydraulic press surpasses anything that has yet been invented, and may be carried to any extent that the strength of the metal will stand. The presses which were used to raise the tubes of the Menai Bridge when worked by a 40-horse power engine were capable of exerting a power equal to that of 14,200 horses, and raised one-half the tube, or 900 tons, slowly but steadily, through the 100 feet at which they were to be placed above the level of the water.

Air is, perhaps, too elastic to be ever practically used as an accumulator, but as a transmitter of power it nearly succeeded in the Atmospheric Railway in superseding the locomotive, and might have done so if engineers had been able to make a durable air-tight valve; and if they ever do so now it may again come into play. In the meanwhile a most ingenious combination of the working and transmitting power of air is employed to carry out the great tunnel through the Alps, which, without its aid, would be difficult in the extreme.

The tunnel under Mount Cenis is to be rather more than seven miles and a half in length, and as it is one English mile below the summit of the mountain, no air-shafts could be sunk from above; and the first difficulty was to ventilate a cul-de-sac that at one time, at least, must be nearly four miles in length. This has been accomplished

accomplished most successfully by M. Sommeiller the engineer, availing himself—on the Italian side—of a stream of water eighty feet above the mouth of the tunnel. This is used to force air into a chamber, where it is kept at a constant pressure of six atmospheres by a stand-pipe 165 feet (50 metres) in height. From this it is conveyed in pipes to the innermost end of the excavation, where it is set to work to bore holes in the face of the rock for blasting purposes. There are eight perforators, each of which sinks ten holes three feet deep in the face of the rock in six hours. It takes some time to dry each of these, and to charge it with gunpowder; and it takes four hours to clear away the débris and to make all ready for commencing another set of perforations. So that practically only two sets are bored in twenty-four hours, and the progress is consequently six feet per day. At each blow on the head of the jumper a portion of the compressed air escapes, as steam does in a high-pressure engine. Its expansion is sufficient to cause a draft outwards, and keep the place perfectly ventilated; and even immediately after a blast the tunnel is freed from the products of the explosion very rapidly, and no inconvenience felt. By improvements in the machinery the engineer hopes to bore one set of holes in eight hours; and as the more work it does the more air it blows off, not only will the work be expedited, but the ventilation improved by the more rapid working.

There are numberless other methods by which air and water can be and are applied either separately or together, according to the locality or the nature of the work to be performed. They are invaluable assistants in mechanical operations as transmitters or accumulators, and when certain mechanical difficulties are conquered, will no doubt be much more used for these purposes than they have been hitherto; but as workers they are daily sinking into insignificance as compared with steam, which, whether used for locomotive purposes at sea or on land, or in stationary engines, bids fair to perform most of the heavy work of the world.

Without doubt the invention of the steam-engine is the greatest mechanical triumph which man has yet achieved. The use of horse-power, or of wind or water, was merely catching a portion of those forces which were already in motion on the face of the earth, and putting them into harness in order to extract as much work out of them as their inconstant nature would admit of; but the steam-engine owes its power to forces which were absolutely dormant till called into action by processes in its own interior, and which can be stopped or regulated at the will of those who have charge of it. The nearest approach  
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to such an invention before its time was that of gunpowder. It showed great cleverness to collect certain substances and mix them together, to put them into a retort, and then, by raising their temperature, cause them suddenly to expand, so that they should strike a blow on a piece of metal with such force as to send it in a certain direction through the air. All this was very like what is done in the steam-engine, but it has hitherto been chiefly used to destroy man and his works, and it is by no means clear how it can well be used for any less violent purpose. It, no doubt, has had a wonderful effect in arousing the energies of man, and forced him to exertions which have had the most beneficial effect in advancing his civilisation. But a counterpoise was wanted which should be as essentially productive as gunpowder was destructive. This has been found in steam. Although the invention of a practical engine is hardly more than eighty years old, and it is little more than half that time since its real value came to be appreciated, the mode in which engines have been multiplied and improved during the last forty years, and the thousand new purposes to which they have been and are daily being applied, is perhaps the most extraordinary fact in the industrial history of the world. It certainly is the one, the magnitude of whose results we are the least able to grasp.

One of the greatest advantages of the steam-engine, besides the power of placing it anywhere, is the wonderful flexibility with which it can adapt itself to almost any work it is set to perform. The difference between an elephant and a race-horse is not greater than between a Cornish pumping-engine and an express locomotive. The perfection of the former arose from the necessity of importing every ounce of fuel to be used in Cornwall, and frequently of carrying it for miles over bad roads. This set engineers calculating how fuel could be saved, and with such success, that at one time a pound of coals did twice the quantity of work that it did elsewhere, though this difference is fast vanishing now.\* To any one accustomed to the noisy activity of most marine or manufacturing engines, nothing can be more remarkable than the sleepy quiet of those of Cornwall. The fire-bar area is so great, and the boiler arrangements so roomy and so carefully appropriate, that all the fuel and all the smoke are consumed, and none issues from the chimney. In the engine-room nothing is seen but one great cylinder, hooped with wood, and looking more like a beer-vat than a part of an engine, and almost as cool to the touch. A few slender bright rods

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\* The usual duty of a Cornish engine is one million of pounds raised one foot high for every pound of coal consumed. According to Sir W. Armstrong the average duty of engines of all classes is not more than one-third of this.



extend from the roof through the floor, and to these are attached some delicate bright handles, of rather fanciful forms, but these suffice to open and shut its valves and to regulate its expansion. As the stranger enters, all is quiet and at rest; no burst of smoke, no smell of oil, no escape of steam, and no noise; presently there is a click click among the handles, the great beam lazily raises itself and lifts 100 or 200 fathoms of heavy pit work some ten feet upwards, and then as quietly drops it again into its place. Having done this giant's work it goes to sleep again for ten to twenty seconds, as the case may be, till called upon to make another effort. This it repeats at stated intervals during the whole twenty-four hours, week after week, or for months together, without rest or intermission.

Contrast this with the express engine, rushing past at a speed of 50 or 60 miles an hour, making 1000 or 1200 pulsations in a minute, consuming coals with reckless wastefulness, and casting its vital heat and life's blood to the four winds at each beat of its valves. Nothing that man has done comes so near to the creation of an animal as this—even the most unimaginative can hardly help drawing comparisons between the steam-horse and his quadrupedal competitor. There is indeed more in the comparison than appears at first; especially when we see the monster fed with great spoonfuls of cooked black vegetable food, from which it evolves its vital heat in its capacious lungs, which, after circulating through its tubular veins, is launched into the air with the waste products of combustion.

The point in which the comparison fails is, that while all of Nature's creatures elaborate within themselves sufficient intelligence to feed themselves, and perform all the functions for which they were created, man's engines, without the direct and constant aid of his hand and intelligence, become mere complex masses of iron or of wood, as dead and as useless as if resolved into their original ores or earths, and buried again in the recesses of the mountains. The steam-engine might be, and probably will become, more like an animal yet, but nothing has been done for the sake of imitation: everything has grown out of use, and for once, too, man has conceived what nature did not even suggest, for among all the myriad forms of life none has been detected progressing on wheels with cranked axles. In this, as in most things, the steam-engine is strictly original, and, strange to say, no new principle has been invented since Watt left it, and no new form added which he did not at least foresee. The immense progress that has been made since his day has been due to the daily growing perfection of workmanship, and more perhaps to the careful adjustment of every part, and of every

every engine to the exact special work it has to perform. The progress is practically due to the knowledge which is obtained by the daily experience of those who watch the working of all these engines, from those which make three strokes in one minute, to those that make 1000 in the same time, as well as all the intermediate grades between these two extremes, which are hourly performing every class of work under the most completely various circumstances.

There does not seem to be any theoretical limit to the size of a cylinder of a steam-engine, or consequently to the power that may be given to it, but, practically, it is generally found more expedient to use two or more engines to do a given amount of work than to increase to any very great extent the power of one. Pumping-engines with cylinders 100 inches in diameter, and with 10 feet stroke, are common in Cornwall, and those used to drain the Haarlem lake were 144 inches in diameter; and in the 'Warrior' and 'Achilles' the pair of engines are nominally 1250 or 1300-horse power, but really work up to 5000 or 6000-horse power. When more than this is wanted, it may be expedient to divide it, as was done in the 'Great Eastern,' between two sets of engines; for it is not only the cylinder, but the crank-shaft, and all the gear, that require to be increased in the same ratio. Although the power of our factories to produce the immense forgings requisite for these purposes has been increased ten-fold within the last thirty or forty years, and is daily increasing, there are conveniences in dividing power, where there is room to do so, that will probably prevent any great increase in this direction.

The whole progress has been, as is usually the case, one great system of action and reaction. The manufacture of larger engines has required improved tools, and more refined processes in every department of iron manufacture, but neither the one nor the other could have been effected to the extent required without the aid of the steam-engine itself; hand in hand they have gone on improving, and improved, till the great steam-engine factories of England and of the Continent are the glory of the mechanical engineer, and present one of the most remarkable triumphs of mind over matter that the world has yet witnessed. Nothing can well be more astonishing than to see a great mass of six or eight tons of iron being forged under the powerful blows of a Nasmyth hammer; or great armour plates, four or five inches in thickness and ten or twelve tons weight, being fashioned under the gigantic rollers now in use. Nor is it less wonderful to observe the planing, slotting, or turning machinery of these factories, fashioning the hardest iron as easily as wood might

might have been shaped not long ago, and with a precision of workmanship which was not attained in mechanical woodwork till very recently.

To the engineer this perfection of workmanship is more interesting and more wonderful than the Titanic exhibition of power. With Whitworth's gauges and measuring machines, quantities may be appreciated and worked which the human touch cannot feel, and the eye cannot mark, without instrumental or microscopic aid; and any one who has realized what perfection of workmanship it requires in order that a locomotive or a screw engine should pulsate with such enormous rapidity, without loose joints or heated bearing, well knows that this accuracy is no idle exercise of ingenuity, but constitutes in reality the principal source of power in modern engines. With the same dimensions this perfection of workmanship has doubled their effective work as compared with those in the beginning of the century, and is as characteristic of the machinery as of the power that drives it. Nowhere is this more apparent than in all the delicate processes by which the fibres of cotton are sorted out, laid side by side, and finally spun into thousands of gossamer threads, so delicate that even the effeminate touch of the Hindoo can hardly match them; and this is done with an evenness and uniformity which no human hand can rival. Yet all these fairy fabrics are spun and woven by an iron beast as heavy and as strong as fifty elephants, and without any of those delicate organizations which pervade every living being.

In England it is calculated that, when the cotton manufacture is thriving, there are thirty millions of spindles constantly employed in spinning cotton alone, so that if every man, woman, and child in the three kingdoms were to devote twelve hours a day to this occupation, they could not effect as much; and it would require another population of nearly equal extent to prepare the cotton for the spindles, and a very large number of persons to supply the place of the 300,000 power-looms that are employed to weave it, and to supplant all the mechanical appliances that finish it and fit it for the market. All this is required for cotton; but when we add to this the amount of power employed in spinning and weaving flax and wool, and all the different classes of fibres which we have enlisted in our service, the power employed in cotton alone sinks to a mere fraction.

However marvellous the variety, or astonishing the quantity of articles produced by the unceasing activity of the millions of horses or horse-power which the mechanical engineer has created,  
all

all their labour would be in vain if it were not for the assistance of the carrying branch of the same profession. Unless every corner of the world were ransacked to bring raw materials to the countries possessing coal and iron, the steam-engines would soon cease their labours; and it is equally indispensable that the manufactured products should be returned to those who cultivate the soil, or gather the mineral products of distant climes. In striving to effect this in the cheapest and most expeditious manner, the civil engineer has executed a series of works more striking at first sight than those of the mechanical engineer, and more pleasing, because more permanent, though perhaps they do not surpass them either in ingenuity or usefulness.

As hinted above, the sea is, and probably always must be, the great high road of nations. To the mere savage no barrier can appear more impassable than the unstable salt ocean he sees before him; but he soon learns how much more easily a large body is moved in water than on land, and whether to catch fish or to visit neighbouring ports a log becomes a canoe, a canoe a boat, and a boat soon passes into a ship.

During the three thousand years that have elapsed between the launch of the 'Argo' and that of the 'Great Eastern,' men have striven unremittingly to perfect this great problem; and though the progress has been uninterrupted, and wonders have been accomplished, still what has been achieved during the last thirty years makes us wonder how so little was done during the previous three thousand; and if we continue to improve at anything like the same rate, the speed of our steam-vessels will equal that of our railway trains, and a man may easily go round the world in a month.

Till the invention of the compass, long sea voyages were of course impossible, and large vessels were consequently not needed for commercial purposes; but the discovery of the uses of a keel, or something to enable a vessel to hold a wind, even if she could not beat to windward, was almost as important, for propulsion by oars must always have been very expensive and inefficient in large vessels. An immense impulse was also given to the improvement of vessels by the discovery of America, and of the passage round the Cape, and since then the progress has been rapid and steady; but it was not till propulsion by steam cleared the problem of all extraneous considerations of weatherlyness, steadiness, and handiness in manœuvring, &c., that marine architects fairly grappled with the subject.

In order to explain the problem the shipwright has before him, it may be necessary to state that a vessel, for instance, of 1500 tons, 36 feet beam, 250 feet long, and with 20 feet draft, dis-  
places

places 20 tons of water for every foot she moves forward, and the question is what is she to do with this? If she heaps it up before her as the old bluff-bowed vessels did, she has not only to climb over it, but she has wasted an enormous amount of power in lifting what she might have left lying. As every contractor knows, he is paid the same for wheeling stuff twenty yards forward as for raising it one yard high; and what the naval engineer seeks to do is to spread his displaced water laterally, evenly, and flatly over as large a surface as possible. The progress already made in this direction will be understood if we take for instance the resistance of a square box as our unit. By simply rounding off the corners, the power requisite to force the box through the water is diminished by one-third; by introducing such lines as were usual in the best ships thirty years ago, the resistance is lessened by two-thirds. Whereas now, in consequence of the improved lines which are mainly due to the long scientific investigations of Mr. Scott Russell and his coadjutors, the resistance is only one-twelfth of that of the box first mentioned; and this fraction may before long be reduced to one-twentieth or even one-twenty-fourth. The consequence of this is, that twenty years ago engines of 500-horse power barely sufficed to drive a vessel of 1000 tons burthen ten knots through the water; the same engines would now propel a vessel of 1500 tons at least fourteen knots; and better results than this are being attained. Already twenty miles an hour has been reached, the Holyhead packets working steadily at that rate; and even an armed dispatch vessel has just left this country for China, which, with all her armament on board, can do as much, and that without any extraordinary exertion. Having reached this speed, we cannot long be content with less. Vessels must cross the Atlantic at the rate of 500 miles a day. It would be expensive to build a vessel to do this to-day, and it might be at some waste of power that she would accomplish it, but day by day it is becoming less difficult, and before long it will be easy. Had the 'Great Eastern' been built for speed alone, she could easily have accomplished this; but carrying power was her great object, and her calculated speed was 15 miles, which she accomplishes with singular evenness in rough weather as well as smooth. She has run 475 miles in twenty-four hours, but her average speed is about 360, or 15 miles per hour, or about the average speed of the best ocean steamers of the present day. This they accomplish easily without the sacrifice of any of their qualities as sea-going vessels, while retaining the capability of accommodating a large number of passengers, and a considerable amount of cargo for a voyage of 3000 miles,—the  
distance

distance (speaking in round numbers) of New York from Liverpool.

But it is not only in speed that such progress has been made, as vessels have increased in size in even a greater ratio. Thirty years ago 1300 tons was the measurement of our largest Indiamen, and 2000 tons of a first class line-of-battle ship. We were all astonished some ten years ago when we heard of the 'Duke of Wellington' being launched, of 3800 tons; and the 'Himalaya,' of 3600, built since that time, was the largest merchant vessel the world had ever seen. Now our first class iron-plated frigates measure at least 6000 tons. The 'Great Eastern' is 691 feet long, 83 feet wide, and registers 18,914 tons, though her real capacity is nearer 25,000 tons, and the indicated power of paddle-wheel engines is equal to 3600 horses, and that of her screw to 4800, making together 8400 horse-power. If she has not obtained, commercially, the success that was anticipated, it is not that our engineers did not know how to design and build her, or how to furnish her with the requisite power, but simply that she was born before her time. The world is not yet ready for vessels of her size. Without disrespect to any one, we may say, that until vessels of very large size become more common than they are, and until nautical experience has been enlarged by the use of such ships, there cannot be captains capable, in the highest sense, of commanding, or sailors and engineers sufficiently educated to work, so gigantic a machine. Our harbours are not big enough to receive her, and there is not a single dock in existence which she can enter for repairs. All this may render her a bad speculation, but her building has tended more to set at rest most of the problems of naval architecture than anything that has yet been done. We now know that there are no engineering difficulties in size, and no practical limit except expediency to the amount of power that might be applied. All the problems connected with speed, and the means by which it should be obtained, have been immensely advanced by this great experiment, and we can now safely go back to vessels of 10,000 tons and twenty miles speed, with which we may be contented for the present. Before such size and speed can be economically attained we still want some further improvements in the forms of vessels, but, more than this, we want the power of using high-pressure steam with safety, and of using it expansively to a greater extent than has yet been done at sea, and we want to be able to return the condensed steam to our boilers without waste. The difficulty in effecting these improvements lies more with the engineering crews than the engineers. The latter could effect them all, but the machinery would be so refined that it could

could not be entrusted to those who have now charge of our vessels: but this is not a difficulty that can long be allowed to stand in the way of so desirable an improvement. The Americans have that class of men, and though principally employed hitherto in their sailing mercantile navy, it has enabled their ships to outsail ours, and to carry cargoes cheaper than we can, from every port where we meet, and has led to a beauty of form and perfection of rigging which our ships cannot compete with.

We, on the other hand, have been so intent on improving our steam-vessels, that sailing ships have been comparatively neglected; but to these also we must now turn our attention. The improved lines have already done a good deal, but the introduction of iron masts and iron yards with wire rigging may probably do more. The immense length which we now know can be given to vessels relatively to their midship-section—which is the principal measure of resistance—will enable four or five masts to be used instead of the stereotyped three; and as there is no practical limit to the squareness of steel or iron yards, a cloud of canvas may be spread low down which will propel a vessel with a speed hitherto undreamt of. So long as ship-builders were limited by the length of the spars they could find in a wood, they were obliged to pile sail on sail to a height where they acquired a leverage doing more harm than good. All this is altered by the introduction of greater proportional length and iron rigging. Such a size of yards and sails as would be necessary to carry out these improvements would be practically impossible when only man-power was used, but since we have learned to use steam through accumulators that difficulty vanishes. A small 10-horse power sailor-engine would in a few hours store up such a mass of power in two or three accumulators in the hold of the vessel as would brace the yards round in a few seconds, and do all the heavy pulling and hauling of the ship. With all these appliances may we not anticipate from the agency of our old, but inconstant, friend the wind a speed nearly, if not quite, equal to that which steamers are now accomplishing? Is not twenty miles an hour a possible speed for even sailing ships?

This increase in the size of ships, and their constantly growing number and importance, have required a corresponding increase in the dimensions of the ports for their reception, and worthily have the engineers responded to the call; for some of the modern harbour works rank among the largest structures in the world, and, considering the difficulties among which they have been  
erected,

erected, display more skill and ingenuity than any buildings standing on dry land.

The ancients executed works which appeared to themselves very mighty,\* but none which will stand comparison with those of modern engineers. The Mediterranean is full of natural harbours, which sufficed for the small shallow vessels of the Greeks or Romans. Even the imperial port at Ostia, which was by far the greatest artificial work of the class undertaken in ancient times, would not be thought much of now-a-days. The Port of Trajan was little more than a hexagonal basin covering some seventy acres of ground, and consequently less in extent than the Victoria Dock at Blackwall; and infinitely less in an engineering point of view, as the Ostian Port was probably hardly more than ten feet deep, had no locks or entrance-gates, and was consequently liable to be silted up by the river, which necessarily had free access to it; and the Claudian Port, forming the sea-entrance, was both in design and extent very like the Duke of Buccleugh's Harbour at Granton. But even then it is probable that the Ducal surpassed the Imperial Harbour as an engineering work as much as ours are inferior to those of Rome in an architectural point of view.

Down to the end of the last century we were content with such estuaries or such natural harbours as Nature had provided us with. It was then thought quite sufficient to line a river's banks with quays, to enclose a natural pond by walls. Occasionally a jetty timidly thrust itself a little way into the ocean, and in our royal yards some handsome graving docks were excavated for the repair of ships.

The first person who boldly confronted the difficulties of the case was De Cessart: he, in 1783, proposed to convert the open roadstead of Cherbourg into a land-locked harbour, by constructing the celebrated breakwater in water forty feet deep at low spring tides, where the rise was nineteen feet, and where the whole structure was exposed to the sweep of the heaviest ocean swell. The means he took to effect his object were ingenious, and theoretically correct; but he miscalculated the power of

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\* Virgil says (Georg. II.)—

'An memorem portus, Lucrinoque addita claustra,  
Atque indignatum magnis stridoribus æquor,  
Julia quâ ponto longè sonat unda refuso,  
Tyrrenusque fretis immittitur æstus Avernis?'

And Horace (Ep. ad Pisones)—

'Sive receptus  
Terrâ Neptunus arces Aquilonibus arcet,  
Regis opus—Sterilisve diu palus, aptaque remis,  
Vicinas urbes alit, et grave sentit aratrum.'



framing timber cones sufficiently strong for the purpose, and partly from mistakes in placing them, partly in consequence of the failure of funds before the works were sufficiently advanced for the cones to afford each other mutual protection, the original mode of construction was abandoned, and that of a great extent of 'Pierre Perdue' \* carried out in its stead. The calculations of De Cessart have, however, been fully justified by the result. The breakwater has now been completed at an expense of 230*l.* per lineal foot, including the sea wall and the forts which crown it, and it answers perfectly the purposes for which it was designed.

It was not till nearly thirty years afterwards (in 1812) that we attempted anything that could at all compare with this, by commencing the Plymouth Breakwater. That at Cherbourg, however, is 12,700 feet long, the one at Plymouth only 5300. Ours is a-wash with the high tide—the French work is crowned by a wall rising fifteen feet above the highest tides; and notwithstanding its being in so sheltered a position and near the quarries, ours cost 283*l.* per foot against the 230*l.* of the French.

We are at present constructing three very extensive breakwaters on the newest principles, somewhat like the Cherbourg example, but with such variations as the local circumstances suggest. At Portland, where stone is abundant and easily got, the outer arm, 6000 feet long, is only a rubble mound raised above high-water mark. At Holyhead, after the rubble has been deposited long enough, a great trench is excavated in it, and a sea wall built along its whole extent. At Alderney, where stone is less plentiful and has to be fetched further, the rubble is carried up only to twelve feet below low-water mark, where being below the action of the waves it will stand at an angle of nearly 45°, and then on this foundation a sea wall is built, the platform of which rises considerably above the highest tides. The first of these breakwaters has cost on the average 120*l.* per foot, the second 160*l.*, what the third may cost nobody knows. Owing to mistakes in the original design, they are now throwing in rubble at a depth of 120 feet, and must go beyond that depth if it is ever to answer the purposes for which it was intended.

The French in the meanwhile have invented a new system of pier building, which promises the most satisfactory results. Having ascertained that no wave that rises in the Mediterranean ever disturbs a block weighing from twenty to twenty-five tons, they have formed gigantic bricks of concrete, or *béton*, of that weight, and throwing them at random into the sea along the line of their breakwater, use them to protect either a hearting of rubble or such sea walls as they may require. The new Mole at

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\* Loose blocks thrown into the sea at hazard, not formed into masonry.

Algiers consists of a base of rubble 17 feet high and 156 feet wide, on which the béton blocks are thrown into the water till they rise out of the sea thirty-three feet above the rubble, making a total height of fifty feet, and this has cost only 122*l.* per foot. At Marseilles the enclosure of the new harbour of Joliette is composed of a rubble hearting, surmounted by a sea wall, and protected only to seaward by these blocks, and it only cost 86*l.* per foot. At first sight this French mode of pier building appears weak and unconstructional, but there seems no reason to doubt its durability. Though some of the blocks are slightly weathered, they stand well; and even if one broke up and was carried away, it would cause no breach, and could easily be replaced. Indeed the very roughness of the construction seems an advantage, as it breaks up the waves and as it were screens them, and so prevents their breaking over the sea wall, which with a smoother foreshore might be the case.

Such a system might perhaps have been advantageously adopted at Dover. There being no rubble to be obtained for a breakwater there nearer than Portland, it was determined to erect a pier of masonry with a hearting of concrete built from the bottom of the sea in fifty feet water by the aid of diving bells. This has now been done to a distance of 1800 feet from the shore, and it is perhaps the most beautiful specimen of a wall constructed in the sea which has yet been executed; but the process is so slow that it would take fifty or one hundred years to complete the harbour as originally intended, and its cost is 415*l.* per foot forward, which is fatal to the extension of works of this sort.

Another mode of constructing piers has recently been engaging the attention of engineers, and promises satisfactory results. It is in fact a revival of the idea of De Cessart of building a breakwater in circular masses on the shore, and floating them to the spot where they are required, only carried out in stone instead of wood. It was attempted at Sheerness in 1812, by Sir William Bentham, with fair success, and has been done on a smaller scale elsewhere. Though it may at first appear paradoxical, there is no more difficulty in building a stone ship, especially if shaped like a circular tower, which is the form wanted, than there is in building an iron one, nor in making it of sufficient strength to float across a harbour, and when sunk in its place and filled with concrete it ought to form as stable a pier and as cheap as any yet executed.

Where the water is shallower or the spot more protected, our engineers have fifty other expedients for making sea walls. But those above quoted are sufficient to prove that where the depth of water does not exceed fifty feet, any amount of space may now be permanently enclosed by breakwaters varying in price from 100*l.*

100*l.* to 200*l.* per lineal foot, and the experience gained during the last twenty or thirty years will certainly tend to bring it nearer the first named than the higher sum.

Although it is a more impressive sight to see man struggling with the ocean, setting limits to its power, and producing calmness and shelter in the midst of the tempest, than to contemplate his operations where he has no such adversaries to subdue, still such breakwaters as those just described are neither the largest nor certainly the most expensive works required for the accommodation of shipping. The construction, for instance, of the docks at Birkenhead will cost, with the appurtenances, six millions of money at least, which is more than would be required to finish all the harbours of refuge we have undertaken on our coasts; and even this sum is a trifle when compared with what has been spent on the docks of London, Liverpool, and other great commercial cities.

In the Mediterranean and other tideless seas, it is sufficient to erect a breakwater or to excavate a port. No locks or gates are required, for the vessels can always lie along the quays at the same level; but in all harbours on the great ocean, the case is widely different. It is scarcely possible to find any place where the water is deep enough for a large vessel to be alongside a quay wall at low water, without touching the bottom; and even then, the inconvenience of the vessel's being at one time from 15 ft. to 20 ft. lower than another is so great in loading or unloading, that, when docks are not provided, the vessels generally lie in the stream or in the middle of the harbour, and then cargoes have to be transhipped into lighters. All this, however, is so inconvenient as to have led early to the introduction of floating-docks. At Bristol it was done by providing a new channel for the river, and cutting off the connexion with the old one at the upper end, and putting locks at the lower end, so as to convert the whole of the channel through the town into one great float.

The want of dock-accommodation was early felt at Liverpool, where the stream is so strong and the situation is so exposed, that vessels can only with difficulty lie at anchor in it. The first dock there was commenced in 1709, the second about fifty years after that; and the gradual steady development of the system, from that time to this, has produced the most magnificent series of dock-works that exists in any part of the world. They extend for nearly five miles (4 m. 1400 yds.) north and south in front of the town; and as the entire site has been gained from the river, the whole has to be protected with massive walls, generally of granite. Within these are twenty-eight great docks, containing an aggregate of 271 acres of water-surface, and approached by more than forty locks with gates varying from 40 ft.

to 80 ft. in width. There are also fifteen graving-docks for the repair of ships, and with the warehouses, sheds, and machinery, an aggregate of works is made up, which, though not perhaps so showy as some of the architectural productions of the Romans or of some modern nations, are, when combined with those of Birkenhead, unrivalled as specimens of solid utilitarian grandeur.

As a single work the great Float at Birkenhead far surpasses anything on the opposite side of the water, or indeed any work of its class that has yet been attempted anywhere. The area of water in this one dock is 121 acres, and it is approached by three great entrances, one of which has a sluicing apparatus, intended to keep the low-water entrance basin free from sediment, and which is constructed on a scale never before attempted; but whether it will attain its proposed object is very much doubted. The principal entrance has gates with a clear opening of 100 ft.; the largest ever constructed, which would admit the 'Great Eastern' if divested of her paddle-wheels, and will admit the largest screw-steamer or sailing-ship that the wildest imagination has yet conceived.

It is difficult to convey a correct idea of the magnitude of such a work as this, for even its money value does not tell the story of its difficulty. It may, however, help us if we recollect that St. Paul's Cathedral cost about 800,000*l.*, and this was more than the expense of any of our mediæval cathedrals. The Parliament Houses cost two millions; and if we take the Great Pyramid of Cheops at a shilling a cubic foot, which is about the price at which a contract could be obtained, it would cost a little over four millions. As before hinted, this dock will cost six; but as two millions, at least, were wasted in doing and undoing, it is probable that a contractor might be found to undertake this Float or the Great Pyramid at about the same lump sum.

The Docks of London are about equal to those of Liverpool in extent; that is to say, they contain about 270 acres of water-surface, and taking into account the expense of land and the amount of warehouse accommodation belonging to them, they probably cost as much money; but being dug out of the dry land, they presented none of the engineering difficulties encountered on the Mersey, and have none of that cyclopean grandeur of masonry which is so impressive there.

Besides these, most English ports are provided with dock-accommodation to some extent, and they make together an aggregate perhaps equal to that of the two great ports.

On the Continent few commercial ports are so provided. Havre has, perhaps, the largest establishment of the kind; but even this would be considered only second-rate on our side of the Channel.

One of the most expensive parts of a great naval establishment consists of the dry docks for the repair of ships. These are generally excavations lined with massive masonry, and furnished with a pair of gates or a caisson at their outer ends, and in commercial ports they are generally made long enough to contain two vessels, one before the other; but at Birkenhead, where everything is stupendous, there is a graving-dock 750 ft. long, 100 ft. wide, and capable therefore of containing the 'Great Eastern.' But its gates are only 50 ft., and it is intended to contain three vessels abreast and three tiers in length, though how this is to answer economically is as problematical as many other things in that gigantic undertaking. Practically, this class of dock is only available when there is considerable rise and fall of tide—when the vessel being admitted at high-water is left dry, or nearly so, by the ebb when the gates are closed—were it not for this, the expense of pumping out the whole of the water is so great, that it has led to the employment of floating-docks or inclined planes, up which the vessel can be drawn, and various other expedients.

The most ingenious of these contrivances is, perhaps, that invented by Mr. Edwin Clarke. This consists in sinking two rows of cast-iron cylinders at such a distance apart as to admit vessels between them of the size intended to be docked. Each of these acts as a hydraulic pump, and acting together, worked by a small steam-engine, they raise a gridiron which is suspended between them at such a depth in the water as may be requisite to receive the vessel. On this gridiron are successively placed platforms, which are constructed hollow in compartments with valves opening outwards; so that the water, which was admitted to sink them, is discharged as they rise, and the saucer—as the platform is technically called—with the vessel upon it can be floated away to any wharf or place convenient for its repair. Six or a dozen vessels can thus be docked by one apparatus in a single day, if there is a sufficient supply of platforms and power enough to raise them. This may not be absolutely the best mode of effecting the desired object, but it seems nearly certain that modern engineering skill will supply some such scientific mode of raising vessels, instead of the primitive contrivance of digging a hole and floating a vessel into it; and, with the plan of working by accumulations, it does not seem that any time or any power ought to be lost by the operation. It is quite true the power required to lift a ship out of the water by this process is the same as is necessary to draw one up the inclined plane of a patent slip; but its advantages are, that it gets rid entirely of the friction of the cradle on the rails, in which so large a proportion of the power is absorbed. It is also a more direct and  
convenient

convenient way of applying power ; and the number of vessels that can be docked by it in one day justifies the employment of steam-power, which would be too expensive for a slip which probably may be used only ten or twelve times in a year.

It is, in fact, a very satisfactory solution in this particular case of the great problem of modern mechanics. We cannot get rid of weight and other resistances which are inherent in solid bodies ; but we may eliminate friction and other resistances which are not inherent, or at all events these resistances may be reduced to a minimum, as is done in this instance, and we may regulate the time of action in proportion to the available power ; and this is pretty nearly all that we can hope to effect by our most elaborate mechanical combinations.

Among the various contrivances which have been introduced to assist in rendering the great ocean available as a highway to the nations, none are more beautiful than the lighthouses that crown the headlands of every maritime country, or point out the dangers of the mid-ocean. Those that are erected on the shore too often, it is true, partake of the absurdities of modern shore-going architecture in general. There are Grecian and Gothic lighthouses, and even Egyptian towers, that would fain cheat us into the belief that they belong to long past ages ; but even then we forget these absurdities in contemplating the beauty and perfection of their photogenic arrangements. These have occupied the attention of some of the ablest scientific men of modern times, and they now send their rays through the darkness with a space-penetrating power that a few years ago would have been deemed impossible, and vary or alternate them with a steadiness and precision that has given confidence to thousands, and saved many a storm-tossed vessel from destruction.

To Smeaton is due the honour of having fixed the form of the best class of these structures ; and even now the Eddystone remains a model which has hardly been surpassed. Nothing could exceed the patient ingenuity with which that great engineer mortised his tall tower to the wave-worn rock, and then dovetailed the whole together, so as to make rock and tower practically one stone, and that of the very best form for resisting, or rather for deadening, the action of the waves. The Bell Rock of the elder Stevenson, which succeeded this, is taller, and even more graceful, but its foundation was larger, and the difficulties far less. The Skerryvore lighthouse of the younger Stevenson surpasses both, whether in beauty of construction or grace of form, and would excite equal admiration for skill in overcoming difficulties, were it not that it is the third of its class, and the work was lightened by the experience previously gained.

It

It is to be regretted that these structures are generally placed so far at sea that they are very little seen, for they are, taken altogether, perhaps the most perfect specimens of modern architecture which exist. Tall and graceful as the minar of an Eastern mosque, they possess far more solidity and beauty of construction; and, in addition to this, their form is as appropriate to the purposes for which it was designed, as anything ever done by the Greeks, and consequently meets the requirements of good architecture quite as much as a column of the Parthenon.

Among English lighthouses that on the pier at Sunderland is remarkable, not for the beauty of its form, certainly, but for the operation performed upon it by Mr. Murray in 1841. In consequence of a breach made in the pier by the sea, and the pier being lengthened, it was requisite either to take the lighthouse down, or to carry it a distance of 475 feet, to a spot one foot seven inches higher, at the end of the new pier, and it was necessary to carry it round a corner, and turn it partly round, to suit its new situation; a task from which the mightiest Genie of Oriental fable might have shrunk appalled.

The mode in which this was effected was as simple as it was ingenious. Holes were first cut through the building north and south, a little above the foundation, and timbers passed through them and wedged tightly up against the masonry. The same operation was repeated east and west, and, alternately supporting each portion in succession, a complete platform of timber was placed under the building. Each portion of this was again supported in succession by screws and wedges, and eight lines of rails were inserted and over these eight baulks of timber, to the underside of which were attached 144 little wheels, each five inches in diameter. Another platform was inserted under the lantern, and tied to the lower platform by a chain inside the tower, and straps of iron outside; and great shores from the outriggers of the lower platform completed the cradle in which the building was supported. It was then pushed and pulled by screws 28 feet northward, when the railway and the wheel baulks were taken out one after the other and reversed, and it was then drawn by winches 447 feet eastward, at an average rate of 33 feet per hour; but at one time it was moved 84 feet in one hour. The light was never extinguished, and no hitch or accident occurred, though the building was sixty-nine feet seven inches in height (of masonry), and weighed 338 tons. And such is the familiarity since acquired with works of that class, that twice the dimensions, or thrice the weight, would hardly make an engineer pause if asked to undertake such an operation.

At

At present the tendency, unfortunately, is to abandon these beautiful and permanent structures, and to adopt wrought-iron cylinders instead. Their cheapness is, of course, the great recommendation, but there is also the rapidity with which they can be designed and erected, which saves both time and thought, and is consequently too great a temptation. But harbour works in general are of so grand and so enduring a character that it may be hoped that something better than these flimsy expedients will soon again be adopted, for we have so few real works of architecture in modern times, that it is a pity to forego any chance that may procure us such examples as these sea-girt lighthouses certainly afford.

Strange though it may at first sight be thought, it seems nevertheless true that men sailed over the sea in ships, and provided ports and piers to shelter them, long before they thought of making roads to facilitate traffic on shore. In early times nations were content—as they are in most parts of the East now—with such loads as could be carried on the backs of beasts of burden. Long strings of camels or mules, or droves of bullocks wandering over the half-cultivated plains, sufficed for all the rude wants of the Phœnician epoch. The Romans, living in a more closely-cultivated country, and with a more extended empire than had previously been known, seem to have been the first to think of employing wheeled carriages for purposes of transport, and consequently the first who deemed it necessary to make permanent roads or to build bridges.

In those days, however, the mechanical branch of the profession was so immeasurably behind that which we now designate as civil engineering, that the professors of the latter were content to effect by brute force what we now accomplish by infinite scientific contrivance. They drove their roads straight as an arrow up hill and down dale, and paved them with blocks of stone, that not only must have enormously increased the friction, but must have tended to destroy any waggon not provided with springs, and have required a Roman's power of endurance to survive a journey long upon them.

In order to understand this, it is necessary to bear in mind that the resistance to a load drawn along a road is made up of two parts, friction and weight. No human ingenuity has yet succeeded in taking one ounce off the weight, though by distributing it over a very long surface, by means of low gradients, it may to a certain extent be rendered practically innocuous. All our skill has been applied to the task of getting rid of friction, and on our railroads we have so far succeeded as to diminish the relative importance of these two elements to an extent never before dreamt of.



of. An active horse, for instance, will draw a cart, weighing a ton, with tolerable ease along a well-made level road ; and when he comes to such an incline as shall require a tractive force equal to what would draw two tons on a level, he can double his power for a short distance and overcome it. The same horse, however, will draw ten or even thirty tons along a perfectly level railway ; but a very slight incline will double this, or require the exertion of ten to twenty times greater force to lift the train up the incline, than what is required to move it on the level, and no horse could even for a few yards accomplish this. Indeed up some such inclines as the locomotive now climbs he would require to put forth the power of 100 horses to lift the train while the friction remains constant at one-horse power. With the Romans all this was reversed. Clumsy mechanical arrangements made friction the element to be overcome ; so much so that it is difficult for us to understand how a four-wheeled *plaustrum*, without a perch, was ever coaxed round a curve—how it turned nobody knows—and with the rude wheels keyed on to the axles, as was generally the case in baggage-waggons, and without grease, the friction must have been so enormous that a slight addition to the lifting power required by a steep incline must have been of comparatively little consequence. Where pack-saddles are used, this is even more apparent ; the load a horse can carry on its back is so small in proportion to its tractive power, that the steepness of the road is of comparatively little consequence.

The mode by which all these difficulties were overcome was so graphically described by Sir W. Armstrong, in his opening address at the meeting of the British Association at Newcastle, that it may as well be given in his own words :—

‘ When coal was first conveyed in this neighbourhood from the pit to the shipping-place on the Tyne, the pack-horse, carrying a burden of 3 cwt., was the only mode of transport employed. As soon as roads suitable for wheeled carriages were formed carts were introduced, and this first step in mechanical appliance to facilitate the transport had the effect of increasing the load which the horse was enabled to convey from 3 cwt. to 17 cwt. The next improvement consisted in laying wooden bars or rails for the wheels of the carts to run upon, and this was followed by the substitution of the four-wheeled waggon for the two-wheeled cart. By this further application of mechanical principles the original horseload of 3 cwt. was augmented to 42 cwt. The next step in the progress of railways was the attachment of slips of iron to the wooden rails. Then came the iron tramway, consisting of cast-iron bars of an angular section ; in this arrangement the upright flange of the bar acted as a guide to keep the wheel on the track. The next advance was an important one, and consisted in transferring the guiding flange from the rail to the wheel ;

wheel; this improvement enabled cast-iron edge rails to be used. Finally, in 1820, after the lapse of about 200 years from the first employment of wooden bars, wrought iron rails, rolled in long lengths, and of suitable section, were made in this neighbourhood, and eventually superseded all other forms of railway. Thus, the railway system, like all large inventions, has risen to its present importance by a series of steps; and so gradual has been its progress that Europe finds itself committed to a gauge fortuitously determined by the distance between the wheels of the carts for which wooden rails were originally laid down. Last of all came the locomotive engine, that crowning achievement of mechanical science, which enables us to convey a load of 200 tons at a cost of fuel scarcely exceeding that of the corn and hay which the original packhorse consumed in conveying its load of 3 cwt. an equal distance.

At the point at which we now stand our mechanical skill has become so great, that the civil engineers have been forced to seek out the lowest levels, to carry long viaducts across our valleys, to bore tunnels through mountains, and to scheme out a whole new system of intercommunication, in order to prevent the necessity of lifting a train up an incline from neutralising the advantages derived from the conquest achieved over the frictional element. Notwithstanding all our ingenuity, we can never, of course, get entirely rid of this difficulty; but we have done wonders in this direction, and are daily accomplishing more.

In addition to the normal difficulties from friction and weight, the crossing of rivers formed a third, that long impeded transport by land. Ferries are not always practicable, ferries are always inconvenient; but to make a permanent roadway across a running stream was a difficulty which in early stages of the science seemed nearly insuperable. With all their architectural skill, the Egyptians never seem to have attempted it, at least they never tried to bridge the Nile; and as they made their own canals, and these were dry more than half the year, they had it all their own way as to how they would cross them, and were probably content with planks, or at the utmost with flags of stone resting on upright supports. The Greeks had few rivers that were not fordable, and never consequently gave their minds to the subject; but the Romans faced the problem boldly, and with that grandeur of conception which characterised most of their architectural undertakings. There are still standing arches built by them of more than 100 feet span, springing at more than 100 feet from the bed of the river. Their greatest undertaking of this sort was probably Trajan's Bridge, over the Danube; but the superstructure was only of wood, though the piers were of stone and 180 feet apart, as near as can now be ascertained.

In modern times the bridge over the Dee at Chester is the largest

largest arch that has yet been attempted in stone. It is 200 feet span, with a rise of only 42 feet; and Brunel built a bridge of brick over the Thames at Maidenhead of two elliptical arches, each 128 feet span, with only 22 feet rise. Though these surpass all that has been done elsewhere in their respective materials, it is probable that these dimensions might be exceeded, if it were worth while; but it is scarcely probable it will be found worth while, as iron is every day more and more employed in the composition of such structures. Before, however, it entirely supersedes the more durable materials, it is fortunate for us that we possess such a beautiful building as London Bridge, perhaps the most perfect specimen of its class in the world. It is constructed wholly of granite, with a centre arch 152 feet span, and with a roadway slightly but gracefully curved. This is far more pleasing than a straight line, with elliptical arches, as may be seen by comparing it with Waterloo Bridge, which, with all its grandeur, fails in reaching the perfection of its younger rival, though this may perhaps be partly owing to the Doric columns, which were absurdly added with an idea of ornamenting its piers.

Long before these great bridges were erected, it had occurred to engineers that iron might probably be employed in building bridges. As early as 1775 Mr. Pritchard built one at Colebrook Dale, 100 feet span, and in 1795 Thomas Wilson erected one at Sunderland, 237 feet clear span, with only 260 tons of metal, while the centre arch of Southwark Bridge, only 3 feet more in width, contains 1665 tons. Hitherto these two have not been surpassed by any arches of the same kind; but Telford proposed to replace old London Bridge with one of a single arch, 600 feet span, and afterwards begged to be allowed to span the Menai Strait with one of nearly the same extent. More recently Mr. Page proposed to cross the Thames just above the Tower with a single arch of 750 feet clear span, to carry two lines of rails and a roadway 24 feet wide, besides footways. Bold as the project may appear, still Mr. Page's experience and admitted knowledge of the subject are such that no one doubts its feasibility. From various causes none of these great schemes have been carried out, though there seems no reason to doubt that they might have been executed with success. As the resistance to pressure in cast iron is as nearly as may be ten times that of stone, there seems at first sight no reason why an arch of iron, 1000 feet span, should not be made as easily with the same weight of material as one of 100 feet of stone; and as blocks can be cast with more precision than they can be hewn, and fitted with flanges and other constructive expedients, even the  
most

most gigantic arches ought to be far easier to build in this material. The one element of uncertainty is the contraction and expansion of the metal from heat ; but there seems little cause to fear it. When we first made railroads we allowed a quarter of an inch free space between each bar, and took every precaution for freedom of expansion and contraction till one man, bolder than the rest, proposed to butt them one against the other and join them with fish-plates. This has now been done, so that the rail from London to Aberdeen is one continuous unbroken bar ; it neither expands nor contracts, but submits, and so probably would a bridge, provided the abutments were sufficiently firm, or if it did expand, it would probably be marked only by a slight elevation at the crown of the arches.

Before, however, engineers had proceeded far in the application of iron to bridges, they perceived that though the metal possessed the quality of resisting compression to ten times the extent of the materials they had usually been employing, it was even more remarkable for its tenacity ; nor were they long in finding out how best to avail themselves of this peculiarity. By suspending the roadway from a chain hanging from the summits of two tall towers, they in the first place got wholly rid of the bugbear of expansion or contraction, and were also able to span a greater space with an infinitely smaller quantity of metal than was required for a bridge in compression. So great, indeed, was the economy of weight, that there seemed no practical limit to the extent of the span, while all other structures were liable to be broken by their own weight when extended beyond certain moderate dimensions.

Unfortunately these good qualities were accompanied by others which disappointed the sanguine hopes that were at one time entertained of this mode of construction. Its very lightness rendered it liable to undulation, always unpleasant and sometimes dangerous ; and its weight was frequently not even sufficient to resist the action of the wind, which ruined at one time the chain pier at Brighton, and seriously damaged the bridge over the Menai Straits, as well as that at Montrose. Notwithstanding this, Telford's great work has answered its purpose perfectly for the last thirty-seven years, and now that it has been strengthened, may still span the Straits for the next three centuries ; while, considering the time when it was erected, it is one of the boldest as well as one of the most graceful works of modern engineering skill.

On the Continent, where scientific knowledge is generally in advance of practical skill, they have carried this principle to excess, by using wire, which is iron in its most perfect form for tenacity.

tenacity. This has reduced the weight of the bridge so much relatively to the load, as to render the undulation excessive, and frequently to lead to the most frightful accidents. Still the bridge over the Sarine at Friburg has stood for thirty years, with very slight repairs, though its span is 870 feet, while that of the Menai Strait is only 570, and the bridge which recently crossed the Thames at Hungerford Market, which was our largest and typical example of the class in England, was only 676½.

The boldest and grandest application of this principle is the bridge constructed for railway traffic by Mr. Roebling, just below the Falls of Niagara. So rapid has been the progress of engineering science, that if any one had proposed twenty years ago to throw a railway bridge over a chasm 800 feet wide and 245 above such a foaming torrent as that of the Niagara, he would have been looked on as a madman. Yet this has now been accomplished, and by very simple means. The bridge consists of a rectangular tube 20 feet deep by 26 feet wide, or rather two floors 18 feet apart—the upper carrying the railway, the lower the roadway for ordinary traffic. These are connected together by a series of wooden posts, braced together by diagonal iron tie-rods. By bracketing out from the rocks, the free length of the tube is reduced to 700 feet, and it is then suspended from towers 821 feet apart from centre to centre by four wire cables of 10 inches section, and each containing 3640 separate wires. These are further assisted by numerous braces radiating from the towers, and a multitude of ingenious minor contrivances.

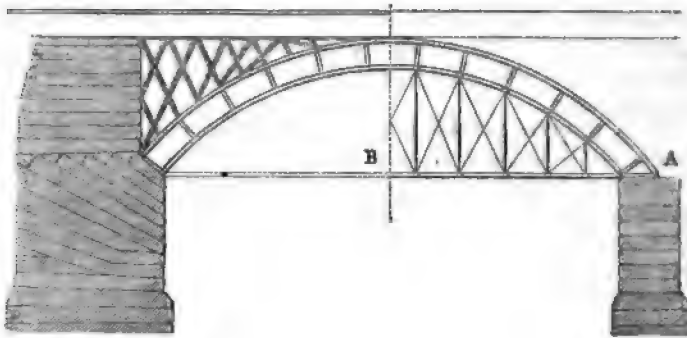
When a train weighing more than 300 tons passes over the bridge, the deflection is said to be only 10 inches; and certain it is that so far it has answered all the purposes for which it was intended, but nevertheless it seems too frail and fairy-like a structure for the rough usage of railway traffic; and trains are not allowed to move across it at a higher velocity than a man can walk. With great care and continuous repairs it may do its work for years to come, but it may any day deposit its load in the boiling flood beneath, and so again separate the provinces it has so boldly united. Indeed, taking it altogether, there can be little doubt that the tubular girder proposed by Robert Stephenson for the same purpose would have been a better piece of engineering. It would have cost more in the first instance, for if the published accounts are to be believed, the suspension bridge cost only 100*l.* per foot forward; but the durability of the tube would have been practically unlimited, its safety undoubted, and an occasional coat of paint all the repair it would have required.

Fortunately for the engineers it is their privilege to be allowed to think. They are not like the architects, first forced to inquire whether

whether or not a thing was done in the fifth century before, or the thirteenth century after Christ, before they are allowed to act, and the progress of improvement in iron bridge building has consequently been rapid. For certain purposes a cast-iron bridge, wholly in compression, was no doubt a very perfect thing, so also was a wrought-iron bridge wholly in tension; but it was easy to predict that the most perfect result would be attained by a structure which should combine these two properties, so as to take the greatest possible advantage of both.

The best method of effecting this was fully investigated, and practically settled, by the very complete and exhaustive set of experiments which were undertaken by Robert Stephenson and his associates before commencing his great work, the Britannia Bridge. The conclusions then arrived at were so sound and satisfactory that it is scarcely probable any extensive railway structures will in future be carried out on any other principle, though for local traffic simple compression or tension structures may still be used.

Although the principles then evolved are now thoroughly understood by every engineer, they are so novel and so little appreciated by the general reader, that it may be worth while to try to explain what they are before proceeding further.



In the above diagram the left-hand side represents the usual form of a cast-iron bridge, supported by abutments, in the same manner as stone bridges are; and its stability of course depends wholly on their immovability. Instead of this, let us suppose that the ends of the arch rested on iron shoes, as at A, and that these were tied together by a chain or bar of iron B: it is evident that by this expedient the arch would be prevented from spreading as well as by the abutments. It will also have this further advantage, that, as the tie expands equally with the arch, and the structure is one homogeneous whole, with only a perpendicular

pendicular bearing in its supports, you have a better bridge than before.

It is remarkable that the Italian architects in the Middle Ages tried this principle in all their Gothic structures; but an iron tie to a stone arch is both mechanically and artistically a mistake. The expansion and contraction of the metal is always working when the stone is at rest, and the flimsiness of the one compared with the mass of the other always produces an effect so disagreeable that the true Gothic architects on this side of the Alps never adopted it. They always applied a stone abutment to a stone arch, which was as essentially the proper and legitimate mode of construction as the iron tie to the iron arch is now seen to be.

This principle of construction, once seized, was used in fifty different forms. One of the most obvious was to frame the arch and the tie strongly together, as shown in the right-hand side of the diagram, making what is called the bow-and-string bridge, and to run the roadway along the tie, in which form it has been extensively employed in railway structures. At the High Level Bridge at Newcastle the spandrels are filled up level (as on the left of the diagram), and the railway runs along the top, the roadway along the string. At Saltash and Chepstow, Brunel substituted a bent wrought-iron tube for the cast-iron arch, and tied the ends together by a chain drooping in the centre, and suspended his roadway from both. At Mayence, Dr. Pauli improved on this by substituting a wrought-iron T girder for the tube, and proportioning all the other parts more scientifically together, so, as to produce what is theoretically perhaps the most perfect truss yet executed. The three spans of the German bridge are only 333 feet each, while the span of the two at Saltash is exactly 100 feet more; but the proportion of the parts is so perfect, that the principle admits of extension up to the limit at which a girder would tend to break itself by its own weight.

The defect of these bridges is that they are a little too clever. If the load were always evenly disposed over their whole surface, and at rest, no doubt every cubic inch of iron would always be doing all its work; but a railway train weighing 400 or 500 tons, and rushing at a speed of forty miles an hour, is a sad disturber of equilibriums: every part that ought to be in tension is at times thrown into compression, and every strut at times becomes a tie, so that engineers generally have agreed to adopt a plain straight girder instead of those with these beautifully calculated curves. The same thing occurred with rails in the infancy of the system. Every mechanic saw, and every mathematician calculated, that a fish-bellied rail must be stronger than a straight one; but the practical result is, that all rails are now made with  
parallel

parallel sides, and there is not one of the other class in existence on any locomotive railway in Europe. It will probably be the same with bridges when the true conditions of the problem come to be more perfectly appreciated, except, perhaps, in structures of such magnitude that the weight of the load bears a very small proportion to the weight of the girder, and where the saving of every ton of iron becomes of importance lest the weight of the bridge should itself become a source of weakness.

Barring such exceptional cases, engineers are generally agreed in making the top and bottom flanges of their girder bridges practically parallel to one another, and when these are of wrought-iron, in putting the same quantity of metal into both. According to strict calculation, the proportions between the top and bottom ought to be as six to five; but as the lower or tension part depends wholly on its rivets, and the top or compression piece might almost be stuck together with glue, the same amount of metal is practically required for both, and the form in which it is disposed is mechanically immaterial. The cellular system has some convenience, but it does not seem to give any strength proportioned to the additional cost and difficulty of construction.

One of the most obvious ways of applying these principles is by means of what is called the Warren girder. This consists of a series of straight cast-iron tubes above, butting one against the other, and a chain of wrought-iron links below, and then connecting these two systems by struts and ties placed diagonally where wanted. Theoretically nothing can be more perfect than this arrangement: it is simple, but almost too simple; if one thing goes wrong all goes wrong; and more margin is wanted for the violent irregularities of railway traffic.

Perhaps, after all, there is nothing better than the simple tubular girder, which was evolved out of the first experiments, and used with such success in carrying the Holyhead Railway across the Menai Straits. The first and most obvious proposal for this bridge was one of cast-iron in compression, which would have been the cheapest and most architectural mode of effecting the object, but the Admiralty interfered, and insisted that a clear headway of 100 feet above high water should be maintained throughout. To meet this difficulty a tube suspended by chains was then suggested, nearly similar in principle to the one recently erected at Niagara; but as the investigation proceeded, it was found that the chains might be dispensed with, if a tube of sufficient rigidity could be constructed to carry any railway train across the greatest opening, which here was 460 feet clear. So complete were the investigations, and so careful the execution of the whole work, that subsequent experience has added little to the knowledge then attained; and, besides being the first, it is, considering



considering the difficulties of the execution, one of the most perfect works of its class. In extent, and in some respects for cleverness of execution, even this bridge is surpassed by that across the St. Lawrence at Montreal, which, though only a single tube, is 6592 feet long, but the centre span is only 330 feet, and the remaining 24 openings average 242 feet. The great engineering difficulty was the erection of such a structure on so rapid a river, frozen at times, and at the breaking up of the ice bringing down great bergs which threaten to overwhelm everything. All these difficulties have been successfully surmounted, and the bridge promises to be as stable as it is efficient.

Neither of these, however, has reached the limits of the system. When, for instance, it was proposed to erect a railway bridge across the Rhine at Cologne, Mr. Fairbairn gave two designs: one for a bridge in four spans, which it was estimated would cost when complete 230*l.* per foot, and one in two spans, the expense of which would have been 280*l.* The latter would have consisted of two tubes, carrying the railway with the roadway between them and footways outside, each tube measuring 1140 feet, supported by one pier in the centre; the two spans being thus 100 feet in excess of those of the Menai Bridge. Indeed there seems no reason why openings of 700 or 800 feet might not be bridged by these means. Whether or not this is the cheapest mode of accomplishing the object is not quite clear. The Menai, with its double road, cost 400*l.* per foot; and the Montreal, with its single line, 171*l.* But the only economy that could be made is in the vertical web that connects the top and bottom. All engineers are pretty well agreed as to the amount of metal which is required to provide a given amount of strength to the top and bottom for a given span, but they differ as to the mode of forming the sides. Thus the great tubes of the Menai Bridge weigh about 1600 tons; 500 tons of this weight is in the top, and a like quantity in the bottom, and consequently 600 in the sides.\* Half that quantity would suffice according to some, and con-

\* The smaller Montreal tubes weigh 252 tons, made up thus:—

									Tons.
Top	..	..	..	..	..	..	..	..	76
Bottom	..	..	..	..	..	..	..	..	92
Sides	..	..	..	..	..	..	..	..	84
									—
									252

So the only economy could be effected in the last item, and this is very inconsiderable compared with the whole cost. For according to the published account the masonry of the piers cost 114*l.* per foot of the bridge, leaving only 57*l.* for the iron work, and the only saving that could be effected would be on one-third of this.

sequently all conceivable forms of lattice girders and trusses have been employed for this purpose, and have economised metal to a great extent; but it has yet to be ascertained whether they are as stable. There is a grand simplicity in a wall of iron, every inch of which is as available in tension as it is in compression, and consequently can take all the varying strains of the traffic without suffering from the inequality; whereas the best designed truss must always be stronger and better in one position than another, and depends more or less on bolts and fastenings, which any inequality or sinking may throw out of work. If such be the case, it is to be regretted, for it is to be feared that the tubular girder can never be other than ugly; while many of those composed of diagonal framings are pleasing in themselves. A mere lattice like that at Cologne is not better than a tube, and is as flimsy as it looks; but a well-designed truss like that of the Charing-cross Bridge is a beautiful thing in itself, and, if the bridge really cost only 130*l.* per foot for four lines of rails, is as cheap an expedient as can well be adopted. The spans, however, are only 154 feet, which, of course, prevents its being compared with the great works just mentioned.\*

In the early ages of engineering experience, tunnels seemed far more formidable undertakings than bridges. Men could face what they saw, and undertake what they could calculate; but it was another thing to burrow into the bowels of the earth to encounter rocks or quicksands, or it might be springs and moving clays, and all this in darkness, and in ignorance of what might come next. All these things are now become perfectly understood, and the mode of making them settled. There have, in fact, been more than eighty miles of tunnels excavated for railways in this kingdom alone under every variety of circumstances and difficulty, and at an average cost of only 15*l.* per foot forward. The experience so gained has been such that were it now proposed to execute a new tunnel under the Thames, there are twenty contractors who would be ready to undertake it, and could carry it through. The first, indeed, would hardly have been found so difficult of execution, had it not been carried too near the bottom of the river, where the soil was only recent sediment and rubbish.

We have become so familiar with these wonders that it is

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\* For the railway bridge now erecting between Southwark and London bridges Mr. Hawkshaw proposed, in order not to interfere with the traffic, to make the central arch 300 feet span,—which would have been a really grand object,—the side arches 150. The authorities decided that if there was one arch larger than the others all the traffic would go through it, and consequently ordered them all to be made equal, so that the barges might be puzzled which to choose!

curious

curious to look back on the interest and excitement caused by an attempt to carry a roadway under the Thames, and still more to turn to what occurred less than one hundred years ago (in 1766), and mark the incredulity and the ridicule which were displayed when Brindley proposed to cut the Harecastle Tunnel in Staffordshire. Yet this was only nine feet wide by twelve feet high, and 2880 yards long; and as the highest summit of the hill through which it was cut is only 190 feet above the tunnel, it could be and was worked by means of fifteen shafts from above. Even this tunnel took eleven years to execute, and at times its daring projector almost despaired of success, nor did he live to see it completed. Compare this with the great tunnel under Mount Cenis, nearly five times its length,\* and at a depth of an English mile (1600 metres) below the summit, so that shafts being impossible it has to be worked wholly from the ends, and so far as can be ascertained through hard rock the whole way; yet there is no reason to suppose that it will take longer than Brindley's tunnel to execute. But the remarkable fact is that no one seems to doubt the success of the undertaking, and any one attempting to ridicule its projectors would only render himself ridiculous. Yet though none doubt the practicability, many doubt the expediency of the undertaking; the truth being that since it was commenced railway engineering has made such progress, it is by no means clear that it would not have been better to keep on the surface of the earth and climb the pass, steep though it might be, than to excavate a tunnel so unavoidably expensive as this one must prove.

It may appear a strange assertion, but it is nevertheless true, that timidity is the cause which has hitherto most retarded the progress of railways. Men hesitated long in employing them, because they were afraid that the smooth wheels would not have sufficient hold on the smooth rails to enable them to draw. They were afraid to join their rails for fear the expansion would cause them to rise and twist; but the most curious thing is that long after the introduction of the present system they were afraid the locomotive could not climb gradients so steep as 1 in 100. The consequence was that ropes with stationary engines were employed—engineers wasted their time and their shareholders' money in inventing atmospheric traction and fifty other devices to get over this difficulty. At last they tried—and now any one may see the locomotive coming from Oldham to Manchester, dragging very heavy trains up an incline of 1 in 27, which is about the slope of Ludgate Hill;

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\* The tunnel is to be as nearly as may be 40,000 feet long, and is estimated to cost 50*l.* per foot forwards, or two millions sterling.

and in America, in some of the mountain passes of Virginia, they rise 1 in 17 and 1 in 20, the latter being the slope of Holborn Hill, which tasks our local traffic so severely ; more even than this, it is asserted that the locomotive has actually scaled an incline of 1 in 10 with a load greater than its own weight.\* This is probably a steeper slope than any turnpike road we have. Whether it is an expedient or economical mode of employing engines to use them in dragging loads up such steep slopes is another question, not so easily answered ; † but it proves that the capabilities of the railway system for extension are unlimited. For though on all main lines where the traffic is great and the trains heavy and frequent, no expense should be spared to obtain easy gradients, still on branch and local lines, where loads are light and trains few, any gradient that will do for carriage traffic will do for the rail. It is also found that where the country undulates and the inclines are not long, there is really no great expenditure of power in working them, the ease with which the downward slope is descended going far to compensate for the exertion required in ascending. It is when the slope is long and continuous that the powers of the engine are most severely tasked ; yet even in that case, great things may be accomplished.

One of the first great lines on which this discovery was utilized was the line over the Semmering pass in the Noric Alps on the line joining Vienna and Trieste. The ascent on the north side is  $13\frac{1}{4}$  miles long, in the course of which 1325 feet are ascended on an average of 1 in 47, and in one place the gradient is 1 in 40, and in addition to this the curves are so sharp and the construction of so expensive a nature that to work it and keep it in repair absorbs the whole profits of the line. The descent on the other side to Murzuschlag is on the back of the slope, nearly straight, and with a uniform gradient of 1 in 50 is worked with facility and without great additional expense.

The Bhore Ghât incline, which has just been completed on the line from Bombay to Central India, is a more formidable and more extraordinary piece of engineering than even this. It is  $15\frac{1}{4}$  miles in length, and the height surmounted is 1831 feet, so that the average is 1 in 48, or about the same as the Semmering ; but for one mile and a half it is 1 in 37, and for 8 miles 1 in 40. The amount of tunneling, bridging, and embanking on the Indian line is such that the cost was

\* 'Minutes of Proceedings of Institute of Civil Engineers,' vol. xviii. p. 51.

† At 36 miles per hour the resistance in rising 1 foot in 100 is doubled thus:—

Resistance in dead level 224 lbs. to ton of load.

" 1 in 100 448 lbs. "

or, in other words, an engine that can drag 200 tons at a certain speed on a level, can only draw 100 tons at 1 in 100, and so on in proportion.

1,100,000*l.*

1,100,000*l.*, or upwards of 68,000*l.* per mile, which is as near as may be the cost of the other. This railway has one advantage over its Alpine competitor—that all the heavy traffic is down the incline, and the trains may go up the Ghât either empty or only partially laden, whereas on the Austrian line the heavy traffic is towards the port and up the incline.

As before mentioned, the Americans work some inclines with a steeper gradient than even these, but never so long or of so permanent a character. But it is now proposed to cross the Simplon by a railway, and before long Innsbruck will be connected with Verona—so that it can hardly be said that any mountain chain which has been traversed by roads is inaccessible to the steam horse. Even the Himalayas might be so traversed; and if a hundred years hence some unborn Brunel be called upon to make designs for the Lahore and Ladak Junction Railway, and find himself forced to tunnel through the ridge—it will not be that the engine could not climb a pass even 18,000 feet above the level of the sea, but that the perennial snows of those regions would form so unsuitable and so unsatisfactory a foundation for his permanent way.

No very recent statistics have been published which would enable us to state precisely what number of miles of railway are made or making, or what they have cost, but it is certainly no exaggeration to say that a sum larger than our National Debt has been spent on these undertakings in the Old World during the last thirty years; and there is no reason to suppose that that sum will not be doubled during the next thirty, if peace continues and commercial prosperity advances with the same rapid strides that it has been taking latterly. Already almost every capital in Europe is united directly or indirectly with every other, except Constantinople; and even the stolid indifference of the Turk cannot long save 'old Stamboul's walls' from being profaned by the scream of the railway whistle.

When Russia has completed the junction of the Baltic with the Black Sea and the Caspian, which she is now engaged upon, there will remain two great enterprises which the next few years will probably see undertaken, if not accomplished. As soon as the Americans are tired of fighting, they will set about connecting the Pacific with the Mississippi; and, notwithstanding the immense tracts of prairie that separate the two, they will no doubt accomplish it. The task of the Old World is to join the Indian lines with those of Europe. Political difficulties and the ignorant bigotry of the three great Mahomedan states of Afghanistan, Persia, and Turkey may retard this; but whether it is done through Turkey or Russia, there are no engineering difficulties that could not be easily

easily overcome, nor would the capital be long wanting if the way were only open. Even if this were done, it is probable that the heavy goods traffic would still follow the route by the Cape; but it would be a revolution the importance of which we can hardly guess at, if the stream of commercial intercourse were again turned into the channels in which it flowed from the time of Alexander the Great to the downfall of the Roman empire.

As might be expected, the conception of these great works soon led to a corresponding increase of dimensions in the stations and all the minor adjuncts of railway traffic. Twenty years ago we looked with wonder at the great halls of Padua and Westminster, though the former is only eighty-four feet span, and the latter sixty-eight, and were astonished at the boldness of their construction. But now we regard with indifference two such halls as those which compose the station of the Great Northern Railway at King's Cross, 105 feet wide, 800 long, and 91 high; and even such a roof as that of the Lime-street station at Liverpool, 152 feet wide, does not excite astonishment. Even now it is only the engineer who knows how difficult the task is—or rather was—that sees anything to be surprised at in the great roof of the station at Birmingham, 864 feet long, and at one end 212 feet wide, without any internal supports. Yet this roof, which is perfectly stable, was erected at a cost of 1*l.* 8*s.* 6*d.* per square yard, and promises to answer for many a long day all the purposes for which it was intended. As a general rule these works have been carried out in too great haste to allow of careful artistic elaboration, and with too much of a feeling that even the largest were only suited to present wants, and would require extension hereafter. They are thus open to adverse criticism: but it is an immense gain to have conquered space; to know that there is no practical limit to the extent of our roofs, and consequently that a largeness of parts may be introduced into our buildings, which cannot fail to have a beneficial effect on the art of design.

While this splendid career has been opening for railways, their elder sisters, the canals, have been falling into neglect and decay. Yet it is only a century ago that the success which attended Brindley's first effort in this direction excited as much enthusiasm, and gave rise to as much controversy, as the railway projects of George Stephenson did in our day. They were nearly as successful then, and answered perfectly the purposes for which they were designed. But it is curious to mark how little the means of communication which then existed between the countries even of Europe sufficed to bring the nations together. The Canal of Languedoc, 148 miles in length, uniting the Mediterranean and the Atlantic, had been commenced in

1661,

1661, and completed in twenty years, nearly a century before Brindley put forward his modest schemes. Yet both in the Parliament and out of doors these were treated as visionary and impossible; and no one seems to have known how much greater works had been executed in France before his day. Now, on the other hand, if a form of bridge or of chair is invented in America, or introduced in India or Australia, it is discussed in Great George-street within a month of its application, and is either rejected or added to the stock of engineering knowledge.

Had railways been invented a century earlier, it is probable that nine-tenths of our canals would never have been excavated; though they do possess qualities that railways cannot compete with, and in flat countries, where water is abundant, they will probably always hold their own. They get rid of friction to even a greater extent than the rail; and the lifting is done by water-power—very simply and economically applied in locks—never by the tractive power, the canal being always a dead level. But, on the other hand, a boat passing through a canal has to displace a quantity of water equal to her own immersed section every time she moves her own length; and, unless this is done very slowly and gradually, the expenditure of power becomes enormous. The locks too are an inevitable cause of delay, and in an active age, where time is so valuable, this inherent vice of slowness is fatal to the system, in all but exceptional cases.

Notwithstanding this the French are now busily engaged in one of the greatest canal undertakings ever attempted. They are occupied in piercing the Isthmus of Suez by a ship-canal, 190 feet at the surface in the narrowest part, and 28 feet in depth. Properly speaking, however, it can hardly be called a canal—it is, as the French call it, ‘Un Bosphore;’ an extension, in fact, of the Red Sea to the Mediterranean without any locks. Now that Mr. Hawkshaw has ascertained that the shores of the Mediterranean are firm enough to support the piers of Port Said, it is shown that there is no engineering difficulty to prevent its execution; and there seems no reason for doubting the dictum of so competent an authority that it can be executed in five years from this time, at an expense of ten millions sterling. Whether it will pay or not is another question. Few, except perhaps the projectors, fancy it will: but it is the realisation of an idea of the Great Napoleon, it is believed to be a wound in the cuirass of England, and it gives the French a footing in Egypt; which, in their eyes, may be more valuable objects than dividends to shareholders. Perhaps they are right, but it is not the mode to encourage the investment of capital in similar undertakings. This, and the manifest absurdity of digging canals to accommodate  
steam-boat

steam-boat traffic, have probably shelved for ever the cutting of the Isthmus of Panama, which used long to be looked upon as a sister project. The progress of the railway system is making it every day more apparent that one or two good railways will amply suffice for the class of traffic that will come across the American, as well as the African isthmus, and at one-tenth part of the expense; while the improvements in sailing and steam-vessels are daily rendering the voyage round the Southern capes less and less objectionable. One railroad has already been constructed to connect the Atlantic with the Pacific, and there will no doubt be others before long. These will answer the purposes of all the traffic we can now foresee at a far less expense, and with far more certainty and rapidity than a ship-canal, even supposing that a ship-canal could be executed at the same expense as the Suez Folly. The science and skill of modern engineers could, no doubt, conquer the difficulties of this route as easily as that of Suez if it were worth while, but it is probable that the one would be of as little advantage to commerce as the other, and it therefore will hardly be attempted.

Generally speaking the aqueduct bridges that carry canals are not graceful structures, the depth of the trough of the canal rendering the superstructures too heavy for the arches. Almost the only exception is the Pont-Cysylltau, on the Chester and Ellesmere Canal, where the water is carried in an iron trough on upright piers; and this form might be made even more pleasing if it were ever to be employed again, though the opportunity will hardly be now afforded for trying it.

A more pleasing form of aqueduct was that which the old Romans used for conveying drinking or irrigation water. The invention of cast-iron pipes has nearly abolished this form in modern times, though one very large but very ungraceful specimen of the class has been built across the Manhattan river, to bring water into New York; and the French have erected the finest modern specimen of the class at Roquefavour, to bring the waters of the Durance to Marseilles and its neighbourhood. The modern bridge is avowedly a copy, but with greatly increased dimensions, of the old Roman Pont du Gard, built for the same purpose in its immediate neighbourhood. The modern bridge is 1289 feet long, the ancient only 882, and 265 feet high, as against 137. Both are in three tiers of arches, one above the other, but there is a largeness of parts in the old example that goes far to restore the equilibrium. The central arch in the Roman bridge is 80 feet, that in the French only 49; and the whole design shows that though the Romans might be our inferiors in constructive skill, they were our masters in all  
that



that related to architectural conception. The Roquefavour aqueduct is only a pretty screen stretching across an opening in the hills. The Pont du Gard is a grand mass, worthily uniting the two sides of a rocky valley. But so it is with almost all our works. The constructive and the artistic branches of the profession are divorced from one another, and practised by different sets of men calling themselves by different names, and fancying they belong to different professions and have different objects in view. Till they unite, and work harmoniously together, we cannot hope to see beauty united with the grandeur we have just been describing.

Wonderful as many of the things are which have been alluded to above, perhaps the most wonderful thing of all is the electric telegraph. And it seems destined to have about as much influence in bringing the ends of the world together as even steam-navigation or the rail. It is, however, the youngest of engineering inventions, and consequently the least perfect.

Hardly more than twenty years have elapsed since the first little experimental line from London to Slough forced itself into notice by assisting in the capture of the murderer Tawell, and since then what progress has been made! Not only is it easy to converse with every important place in England, but messages can be sent to every capital in Europe, and answers received in an incredibly short space of time. Once it was possible to communicate with America, and it probably will be so again before the year 1864 changes its index. Already the Atlantic Telegraph Company have received tenders from eight different firms, any one of whom is competent to the task, and some of these tenders are so favourable that one of them will, no doubt, be accepted; if so, London and New York may be within speaking distance again before twelve months are over, and this time with every chance of their connexion being permanent, so great has been the improvement in the manufacture of submarine cables, and so extensive the experience of the mode of laying them. While this is being debated, a cable has left England which is destined to unite Calcutta with London, and which in all probability will accomplish this object ere long. But communication with any point in the North American coast must embrace also New Orleans and the whole of that continent; our communication with Calcutta extends by an easy link to Singapore, and from Singapore to Canton and Batavia; and from the latter place there is no difficulty in reaching the Australian continent. It may thus be that before many years are over we may see recorded in the morning's 'Times' events that happened at Sydney, or Shanghae, or San Francisco

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on the previous day. Surely this is a wonder and a triumph of scientific skill if anything ever was ; and surely the men who do these things are giants !

Mr. Smiles has profoundly studied, and has happily delineated in his lucid and instructive biographies, that remarkable succession of gifted minds which has, not by lucky guesses, but by incessant labour and by life-long thought, gradually erected that noble example of the dominion of man over the earth—the science of Engineering : and we are proud to know that there are men yet among us who can wield the arms of ‘the invincible knights of old,’ and who will leave no meaner memory behind them.

Besides the admiration which the works of our great engineers excite from the grandeur of their conception or the mechanical skill displayed in their execution, they have still another merit as worthy of the attention of the philosophical inquirer as either of these. They are the best and most complete examples that exist in modern times of an art carried out on scientific principles, and according to those processes by which alone success has hitherto been, or, so far as we can see, ever will be achieved in any art. From the days of old Sir Hugh Myddelton to the present time the only question with an engineer, after mastering the conditions of the problem put before him, was how he could most efficiently carry out the work with the most suitable materials, and within the limits of the means at his command. In doing this the engineers have eagerly appropriated every scientific discovery, and availed themselves of every new invention. They have always used the materials best adapted for their purposes, and in the mode in which most work could be got out of them. They have never looked backwards to the exploded forms of ancient days, but always acknowledged the age in which they lived, trying to outstep even its rate of progress.

In this respect the engineers contrast singularly with the architects who form the other branch of one and the same profession. The latter, instead of following out principles, are content to copy forms, rarely thinking of what is really best under the circumstances. It is sufficient for them to know that a thing was done by some other people in some bygone day, and without thinking how social circumstances may have changed or the arts progressed since that time ; if it has been done before, it ought, according to their creed, to be done again. They aim at restoring an artistic heptarchy in the midst of the progress of the nineteenth century.

The principles which the engineers are following out are identical with those which taught the Egyptians how to erect the  
wondrous

wondrous temples which still adorn the banks of the Nile, by the use of which the Greeks perfected their architecture, and which enabled the masons in the Middle Ages to erect those cathedrals and castles which we still admire so much. In all other ages but this the principles of architecture were as well understood and as fixed as those of engineering. They were, in fact, identical; and it was just as easy to ascertain then what was the best design for a cathedral or a mansion, as it is now to know what is the best form of a ship or the best mode of building a bridge.

The consequence of this divergence of principle is that the architects are quarrelling over Greek mouldings and Gothic pinnacles, and dreaming of reproducing the elegance of classical times, or the blundering enthusiasm of the Middle Ages, while the engineers are spanning our rivers with structures such as the world never saw before—bridging our valleys with viaducts, arching under our mountains, and roofing acres for stations. They are, in fact, executing a series of works that throw everything hitherto done into the shade: but all this, unfortunately, without that touch of higher art which is alone wanted for perfection; and this simply because the building profession is divided against itself. Because its two branches are conducted on different principles they cannot work together. The engineers cannot forego theirs because they are the only principles which men of common sense can follow; so, unless the architects will consent to forego some of their archæological fancies, and work harmoniously with the engineers, we may be condemned to live in the midst of ugliness for ever. It is only this reunion that is wanted to perfect the works described above, and it ought to be easy of accomplishment. The architects themselves would delight in the change. It is the public who are their employers who do not see the necessity for it, and cannot understand its bearing. When once the fact is appreciated we shall surpass all preceding ages in architecture, as we have done in engineering; and if the engineers can only force this fact on public attention they will have done a greater service than in bridging the Menai Straits, or in tunneling through the Alps. To call architecture back within the domain of logic and of common sense is what is most wanted on the part of the engineers to complete the services which they have rendered and are rendering to mankind.

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- ART. II.—1. *The Works of Thomas Hood*. 7 vols. Edited, with Notes, by his Son. London, 1862.  
 2. *Hood's Own, First and Second Series*. London, 1862.  
 3. *Memorials of Thomas Hood*. 2 vols. London, 1860.

IT depends greatly on a man's physical health and animal spirits whether he shall be of a large, calm, outward-looking nature and objective mind, or shall be a brooding subjective being, whose vision is introverted, and whose temperament is too irritable to allow full time for maturing the larger births of literature. The great Humorists, as a rule, were men of overflowing animal spirits. They have, as the term suggests, more moisture of the bodily temperament; the unction of mirth, and the wine of gladness. Such are the Chaucers, Ben Jonsons, and Fieldings, the Molières and Rabelais. But the small, thin men, with little flesh and blood, the Popes, Voltaires, and Hoods, rarely reach this perfect joyousness of feeling. On the contrary, they feel naked to the least breath of the world, as though they were one live sensitive nerve of self, and the slightest touch erects their pens like porcupines' quills. That a man with a powerful frame and robust health may, even in a time like ours, reach the corpulent Brobdignagian humour of the older writers, we have had ample proof in John Wilson, whose life was so opulent, and laugh so hearty, that he could shake off all the cob-webs of our miserable self-consciousness. That which would pierce the little men to the vitals he took as a mere tickling of his cuticle. Those things which are as the mighty blows of Thor's hammer to others only seemed to make him look up and say with Skrymir, 'there must be sparrows roosting in this tree, I think; what is that they have dropped?'

It is a very noticeable feature in Hood's character that, with even worse health than Pope's, he was of a most sweet temper; and no amount of pain and buffeting could turn him into one of the wasps of wit. But to read his nature and appreciate his works, we must turn to his Life.

Thomas Hood by birth was a genuine Cockney. He was born May 23rd, 1799, in the Poultry, London; therefore within the sound of Bow bells. His father was a native of Scotland; but in this instance the old saying, that one Scotsman will be sure to introduce another, was not verified, Thomas Hood being as unlike a Scotsman as possible. His grandmother was an Armstrong; and he used to say in joke that he was descended from two notorious thieves, Robin Hood and Johnnie Armstrong. The genius of Cockneydom, however, was the ruling power  
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in mixing the elements of his nature. He would have been all the richer for a little of the ruddy health of Robin, and the hardihood of the renowned Borderer. But Cockney he was doomed to be; and we cannot help thinking that the 'Song of the Shirt' could only have been written by one who entered deeply into London life, so as to feel instinctively how it went with the poorest poor who dwell high up the dark and rickety staircases, seeing the stars through the rents of the roof; to whom spring only comes in the plant or flower on the window-sill; the gleam of sunshine on the wing of the swallow darting by, or the warble of an imprisoned skylark. Only a dweller in London who knows how the poor live, could fathom the indescribable yearning of the fevered body and pent-up soul for one breath of the country air and boundless space; to cool the feet in the sweet green grass, and the fingers among its wild flowers; to freshen the poor worn eyes with a look at the glad green world of pleasant leaves, waving woods, and blue heaven bending over all.

Hood took cheerfully enough to his birthplace, and thought if local prejudices were worth anything the *balance* ought to be in favour of the *capital*. He would as lief have been a native of London as of Stoke Pogis, and considered the Dragon of Bow Church or Gresham's Grasshopper as good a terrestrial sign to be born under as the dunghill cock on a village steeple. He thought a literary man might exult that he first saw the light,—or perhaps the fog,—in the same metropolis as Milton, Gray, De Foe, Pope, Byron, Lamb, and other town-born authors, 'whose fame has nevertheless triumphed over the Bills of Mortality.' So in their goodly company he cheerfully took up his livery, especially as Cockneyism, properly so called, appeared to him to be limited to no particular locality or station in life. It is likewise worthy of remark, that Hood owes a whole class of humorous character to the streets of London. The 'Lost Child' is a type of what we mean. In this the nature and language are strictly Cockney. The cooped-up maternal agony grows garrulous *beyond measure*; and so all rules of verse are violated in order that ample expression may be given to the grief. The result is a long lugubrious patter; tragedy and farce blending in a burlesque such as Mr. Robson alone could do justice to.

Hood's father was a man of literary taste; had written a couple of novels, and was one of the firm of Vernor and Hood which published the poems of Bloomfield and Kirke White. James, the eldest boy, likewise had literary predilections. His mother, we are told, was somewhat startled to find a

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note-book which appeared to contain some secret confession of hopeless love; the good lady not knowing that her son had been translating Petrarch. Thus Thomas Hood had, as he said, a dash of ink in his blood, which soon became manifest in an inkling for authorship. He was a shy, quiet child, exceedingly sensitive, and delicate in health; fond of making his little observations with continual humour as he sat silently watching, with noticing eyes, the main stream of life passing by. One of his earliest artistic efforts was a great success, although not exactly in the way he had anticipated. He smoked a terrific-looking demon on the bedroom ceiling with a candle, intending to frighten his brother on going to bed; but forgetting all about it, he was himself the victim, and found it no joke.

Disease and death were early and frequent visitors to the Hood family. James, the elder brother, was soon carried off. The father died suddenly, leaving the widow with her little ones but poorly provided for. The wife soon followed her husband. Hood's sister Anne did not survive the mother very long, both dying of consumption. It was on the death of this sister that Hood wrote his tender and touching little poem called the 'Deathbed.'

The mother whilst living had given her son what education she could command. He acquired French, and became a pretty good classical scholar. In his 'attempt on his own life' he speaks of winning a prize for Latin without knowing the Latin for prize. But he had a capable teacher after he left the school at which this happened, and his witty renderings from Latin authors were well known to his friends in after life. We do not make out the precise date at which Thomas Hood was articled to his uncle, Mr. Sands, the engraver, nor how long he laboured at the art which first taught him how to etch his own funny fancies.

He speaks of having sat at a desk in some commercial office, but he was not destined to become a winner of the 'Ledger,' his race being cut short at starting; this he communicates in strictly business language. His appetite failed, and its principal creditor, the stomach, received only an ounce in the pound. In the phraseology of the 'Price Current,' it was expected that he must 'submit to a decline.' The doctors declared that by sitting so much on the counting-house stool he was hatching a whole brood of complaints. So he was ordered to abstain from 'ashes, bristles, and Petersburg yellow candle, and to indulge in a more generous diet.' Change of air, too, was imperatively prescribed. Accordingly Hood was shipped off to visit some relatives in Dundee. As soon as they set eyes on him they did  
what

what they could to send him back again. He had come to the wrong people in search of health. Hood, however, determined on stopping in Dundee. The air of Scotland did him so much good. One of its results was a belief, that although Scotland might not produce the first man in the world, it would undoubtedly be a Scotsman who would live on as the Last Man. To estimate his position at this time, alone in a strange place, hanging on his own hook, he tells us to imagine a boy of fifteen at the Nore as it were of life, thus left dependent on his own pilotage for a safe voyage to the Isle of Man! How he was occupied in Dundee we are not clearly informed; but his first appearance in print was in the 'Dundee Advertiser;' his next in the 'Dundee Magazine;' and he tells us with modest triumph and pardonable pride, that the respective editors published his writings without charging anything for insertion. This he considered success enough to make him sell himself body and soul, after the German fashion, to that minor Mephistophiles the Printer's Devil. Not but what he served some years' apprenticeship before the Imp in question became really his Familiar. As with all literary naturals, he drifted rather than plunged into authorship.

In the year 1821 Hood returned to London, and was engaged to assist the editor of the 'London Magazine,' leaving the engraver's business for that purpose. Here was a legitimate opening, and he 'jumped at it, *à la* Grimaldi, head foremost, and was speedily behind the scenes.' So delighted was he, that he would receive a revise from the foreman of the printers as a 'proof of his regard; forgave him all his slips,' and really thought that printers' devils were not so black as they are painted. But, he tells us, his 'topgallant-glory' was in 'Our Contributors.' How he used to look forward to Elia and backward for Hazlitt, and all round for Edward Herbert; and 'how I used to *look up* to Allan Cunningham,' who was formed by Nature tall enough to 'snatch a grace *beyond the reach* of Art.' Hood has given us a pleasant life-like sketch of Charles Lamb, with his fine head on a small spare body; his intellectual face full of wiry lines, and lurking quips and cranks of physiognomy; brown bright eyes, quick in turning as those of birds,—looking sharp enough to pick up pins and needles. The hesitation in his speech continually relieved by some happy turn of thought which seemed to have been thus naturally waited for. Shy with strangers, but instantly alight with a welcome smile of womanly sweetness for his friends. At Lamb's he met with Coleridge, the 'full-bodied poet, with his waving

waving white hair and his benign face, round, ruddy, and unfurrowed as a holy friar's.' Hood heard the glorious talker at times when he was in the key which Lamb called 'C in alt.,' far above the line of the listener's comprehension. He made marvellous music nevertheless; and Hood felt as though he were carried 'spiralling up to heaven by a whirlwind intertwined with sunbeams, giddy and dazzled, and had then been rained down again with a shower of mundane stocks and stones that battered out of me all recollection of what I had heard and what I had seen.' Here too was poor Clare, in his bright grass-coloured coat and yellow waistcoat, 'shining verdantly from out the grave-coloured suits like a patch of turnips amidst stubble and fallow.' Lamb sometimes bantering him on certain 'Clare-obscurities' in his verses, and anon talking so gravely, towards midnight, that Clare would cry 'Dal!' (a *clarified d—n*) 'if it isn't like a dead man preaching out of his coffin!' De Quincey also was one of the writers for the 'London;' and Hood often saw the small, calm philosopher 'at home, quite at home, in the midst of a German Ocean of literature in a storm—flooding all the floor, table, and chairs—billows of books tossing, tumbling, surging open. On such occasions I have willingly listened by the hour whilst the philosopher, standing with his eyes fixed on one side of the room, seemed to be less speaking than reading from a "hand-writing on the wall!"'

The 'Lion's Head' of the 'London Magazine' was the first mask of Momus put on by Thomas Hood. His punning propensity breaks out in humorous Answers to Correspondents. 'W. is informed that his "Night" is too long, for the moon rises twice in it. The "Essay on Agricultural Distress" would only increase it. B. is surely humming. H. B.'s "Sonnet to the Rising Sun" is suspected of being written for a Lark. W.'s "Tears of Sensibility" had better be dropped. The "Echo" will not answer. T., who says his tales are out of his own head, is asked if he is a tadpole? M.'s "Ode on the Martyrs who were burnt in the rain of Queen Mary" is original, but *wants fire*.'

Amongst Hood's early contributions to the 'London' we find the lovely ballad of 'Fair Inez' and the poem of 'Lycus the Centaur.' This latter poem was a favourite with Hartley Coleridge, who thought it absolutely unique in its line, and such as no man except Hood could have written. The measure, which has a gallop appropriate to the subject, is a difficult one to tell a story in. Yet the poem contains some powerful descriptions, and has not had justice done to it. Here, for example, is a striking picture of the bestialised victims of Circe's horrible charms as  
 another



another human being, newly doomed, comes amongst them with the likeness they have lost:—

‘ They were mournfully gentle, and grouped for relief,  
All foci in their skin, but all friends in their grief;  
The Leopard was there—baby-mild in its feature;  
And the Tiger, black-barred, with the gaze of a creature  
That knew gentle pity; the bristled-backed Boar,  
His innocent tusks stained with mulberry gore;  
And the laughing Hyena—but laughing no more:  
And the Snake, not with magical orbs to devise  
Strange death, but with woman’s attraction of eyes;  
The tall ugly Ape, that still bore a dim shine  
Thro’ his hairy eclipse of a manhood divine:  
There were Woes of all shapes, wretched forms, when I came,  
That hung down their heads with a human-like shame;  
The Elephant hid in the boughs, and the Bear  
Shed over his eyes the dark veil of his hair;  
And the Womanly soul, turning sick with disgust,  
Tried to vomit herself from her serpentine crust:  
While all groaned their groans into one at their lot,  
As I brought them the Image of what they were not.’

His connexion with the ‘London’ brought Thomas Hood many friends in the pleasant spring-time of his literary career; amongst others John Hamilton Reynolds, the ‘Edward Herbert’ of the Magazine. Unfortunately this friendship did not end well. We only mention the subject, because we think that most likely it was in Hood’s last thoughts, and pointed with more significance his latest words: ‘Remember, I forgive all—all!’ One result of the break-up of this intimacy is, that a large number of Hood’s letters are still locked up from the public, and all access to them refused.

Conjointly with Reynolds, Hood wrote and published his ‘Odes and Addresses to Great People.’ The book had a large sale. Coleridge, to whom a copy was sent, ascribed it to Charles Lamb in a letter which pays a just tribute to the good-nature of the Humorist who did write it. ‘My dear Charles, it was certainly written by you. You are found *in the manner*, as the lawyers say. The puns are nine in ten good; many excellent. The *Newgatory* transcendent! And then the *exemplum sine exemplo* of a volume of personalities and contemporaneities without a single line that could inflict the infinitesimal of an unpleasance on any man in his senses.’ The pun specially alluded to occurs in the Address to Mrs. Fry. Hood says he likes her, and the Quakers, with many of their works and ways; but he don’t like her ‘Newgatory teaching.’ We quote one stanza of this ode

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for its admirable good sense, and to show how wit and wisdom are blended in the use of a rough-and-ready illustration :—

‘O save the vulgar soul *before* it’s spoiled !  
 Set up your mounted sign *without* the gate ;  
 And there inform the mind *before* ’tis soiled !  
 ’Tis sorry writing on a greasy slate !  
 Nay, if you would not have your labours foiled,  
 Take it *inclining* towards a virtuous state,  
 Not prostrate and laid flat ; else, woman meek,  
 The *upright* pencil will but hop and shriek.’

Coleridge’s characterisation of Hood’s humour reminds us of the words of Lord Dudley to Sydney Smith : ‘ You have been laughing at me constantly, Sydney, for the last seven years ; and yet in all that time you never said a single thing to me that I wished unsaid ! ’ Hood was in the habit of poking the Quakers in the ribs, and never lost an opportunity of giving them a quiet dig. Yet, we believe, wherever wit is tolerated amongst them, Hood is a chief favourite.

Our author had now tried the reading public as a punster and a poet. He found that puns sold better than poetry. Henceforth his literary life ran in parallel lines of poetry and puns, except where those lines crossed and recrossed, or ran into one—making that peculiar mixture of incongruous elements, puns and pathos, laughter and tears—sweetness exquisitely sad, and sadness exquisitely sweet, known as ‘ Hood’s own.’ The public in general will pay the highest price for being amused. So Hood became its Merriman that he might secure the means of living. Nevertheless, he kept true to the higher life, and wrote his poetry in shy ways and secret places. He piped and piped on his sylvan reed, although the public would not dance to his country tunes, however sweetly they might breathe of the pastoral age, however rich they might be in delicate imagery ; it left him sitting at the gate of his fairy-world, and passed him by for the lure of louder voices, and the glare of coarser colour. He secretly committed several beautiful poems to it, which secret—as Coleridge said of one of his own publications—the public very faithfully kept. It was quite willing to listen if Hood would only make it laugh !

The acquaintanceship with Reynolds was at least so far happy that it introduced Hood to his future wife, Reynolds’s sister—a true woman, pre-eminent for all qualities of fitness, who made the sunshine of years in a life which had much more than the ordinary share of shadow.

Hood

Hood has left a very tender testimonial to his wife in one of his letters :—

‘ I never was anything, dearest, till I knew you ; and I have been a better, happier, and more prosperous man ever since. Lay by that truth in lavender, sweetest, and remind me of it when I fail. I am writing warmly and fondly, but not without good cause. First, your own affectionate letter, lately received ; next, the remembrances of our dear children ; then a delicious impulse to pour out the overflowings of my heart into yours ; and last, not least, the knowledge that your dear eyes will read what my hand is now writing.’

In another letter, written just after his wife has left him to go on a journey, there is an exceedingly natural touch, showing how deep was his affection for her—how restless for her return : ‘ I went and retraced our walk in the Park, and sat down in *the same seat*, and felt happier and better.’

Mrs. Hood was a woman of cultivated mind ; her letters are full of good sense, with frequent overflows of humour. She devotedly gave her own life to eke out his. It was not merely a witty allusion when, speaking of getting out the ‘ Comic ’ on one occasion, he said it had half-killed Jane, and half-killed himself, which he considered equal to one murder. And she must have had one of the sweetest tempers in the world. How else could she have put up with the freaks of this veritable Puck of the Household, who was for ever playing off his tricks, and taking advantage of her innocence ? We are told that it was a custom with the Libyans for the young man to marry the girl who laughed at his jokes. Hood was lucky in securing such a charming wife. She appears to have been able to join in the laugh, even though the joke went against herself. She must have proved a capital subject for his fun, seeing that she was always ready to believe whatever the rogue told her, and each time, when taken in, was never going to be caught again ! ‘ Above all things, Jane,’ says he, warning her against being deceived by the fishwomen, ‘ as they will endeavour to impose upon your inexperience, let nothing induce you to buy a plaice that has any appearance of red or orange spots, as they are sure signs of an advanced stage of decomposition.’ Full of this novel information, armed on one point at least, Mrs. Hood was quite ready for the fishwoman next time, being rather anxious to show off her knowledge. The very first plaice that came had the ominous spots, and Mrs. Hood hinted her fears lest the fish were not fresh. The woman insisted that they were only just out of the water. But Mrs. Hood, in the innocence of her heart and all the pride of conscious knowledge, was ready with her finishing-stroke : ‘ My

good woman, it may be as you say; but I could not think of buying any place with those very unpleasant spots!' The woman's answer, with a suppressed giggle on the stairs, told the young housekeeper all the tale. On another occasion Mrs. Hood had made a plum-pudding for their foreign friend, De Franck, to show him what English plum-pudding was like. There happened to be some white wooden skewers at hand. Hood saw them as they lay pointing, as it were, to the pudding. He poked them into it across and across in all directions, taking care to leave no sign outside. The pudding was packed up and sent. When De Franck came, Hood asked him if he did not think it was well trussed. De Franck, surmising this was the English way of *building* the pudding, gravely replied 'Yes,' and complimented the *other* victim on the ingenuity of her *wood-work*!

Hood was married on the 5th of May, 1824. In spite of all the sickness and sorrow, his children tell us the union was a happy one. The early years of his married life were undoubtedly the happiest that Hood spent in this world. Good fortune appeared to smile from out a bit of unclouded blue heaven above, and all that was wifely and womanly strove to make one spot of earth green and pleasant below. The love of a wife like this was a blessing indeed to the man who had to pass through such fires of affliction and waters of tribulation. Her devotion, willing at all times to transfuse her life into his, must have often heartened him for a fresh effort in the weary struggle. Many a time she must have inspired him to face the outer difficulties by helping to keep the spirit warm, and bright, and hopeful within. When the book shall be written which might be written, on the 'Wives of Men of Genius,' one of the noblest chapters should be given to Mrs. Hood.

Hood had need of all the sunshine and sweetness that could be gathered from these years of happiness to hoard up a little honey in the hive of Home for the sad seasons coming!

A living writer has remarked that perhaps there are not more than a thousand persons in the long roll of illustrious names who have done anything very remarkable for mankind. We think nations should have kept guard at their doors that they might work on undisturbed. But, instead of that, we find the world hindered them all it possibly could. Domestic misery, poverty, errors of all kinds, and afflictions, no doubt disturbed and distressed them. This was singularly the case with Thomas Hood. It makes us feel all the greater interest in that life, and possibly set a higher value on the work done in spite of the

the suffering, because of the moral worth of such an example. Hood's troubles, which he turned into perplexing oddities of merriment and pathos; his heavy trials, which he strove to make light of; his '*moving* accidents by flood and field;' his illnesses and continual dodgings of death, soon began, and followed each other with increasing frequency. Shortly after his marriage he was seized with rheumatic fever. After this, he nearly lost his life while bathing in the sea. Gradually the organic disease of his heart—enlargement and thickening—was developed; hemorrhage of the lungs followed; these were aggravated and increased by compulsory work, ever-recurring anxieties, and the ignorance of foreign doctors, until even his rebounding spirit could bear or bend no farther, and he broke down at the early age of forty-six years.

But we anticipate. It was in the year 1826 that the first series of '*Whims and Oddities*' appeared. In the year following a second series was dedicated to Sir Walter Scott. Both were well received by the public. The '*Plea of the Midsummer Fairies*' was produced at this time, but did not sell. Hood bought up the remainder of an edition from the publisher's shelves, to save the work, as he said, from the butter-shops. In 1829 he left London to live in the country—first at Winchmore Hill, and next at Lake House; the latter place noticeable because he wrote '*Tylney Hall*' there, and evidently got his suggestion for the '*Haunted House*' from its ruined beauty, its signs of past splendour and present desolation; its pictured panels, from under which the rats would peep out at twilight; its weedy wilderness of a flower-garden, where the rabbits would come to skip:—

'A jolly place, said he, in days of old,  
But something ails it now; the place is curst.'

The first number of Hood's '*Comic Annual*' was published for the Christmas of 1830. On the cover was the picture of a boy blowing bubbles; these ultimately increased to eleven, numbering the years of the publication. The fun of the '*Comic*,' palpable and plentiful, secured to the writer much friendship from children of every age. Amongst the other delighted admirers came his Grace the late Duke of Devonshire, with a curious request that Hood would supply a set of titles for the *Dummy Books of a Library Staircase*. Some of these titles are amusing: for instance, '*On Cutting off Heirs with a Shilling*, by Barber Beaumont; '*On the Affinity of the Death-Watch and the Sheep-Tick*;' '*Rules for Punctuation*, by a thorough-bred Pointer;'

Pointer;' 'Percy Vere, in forty volumes;' 'Cursory Remarks on Swearing;' 'Barrow on the Common Weal;' 'Haughty-cultural Remarks on London Pride.'

By the year 1834 Hood had become pretty well known. His work was abundant. His health, too, had benefited by country air and visits to the sea—for which he had the true national feeling. At this time a heavy misfortune fell on him—the failure of a firm involved him in pecuniary difficulties. His sense of honour prevented his passing through the Bankruptcy Court. He determined, like Sir Walter Scott, to write out every penny, instead of having his debts whitewashed over. 'He had fair reason,' he said, 'to expect that by redoubled diligence, economizing, and escaping costs at law, he would soon be able to retrieve his affairs.' With these views, leaving every shilling behind him, derived from the sale of his effects, he voluntarily expatriated himself, and bade his 'native land good night.'

With his indomitable spirit of fun, and his lively way of making the best of the worst that could happen, Hood met his alien lot, smiling the usual bright cheery smile that *would* put a little reflected light into the saddest face of things. It was his belief at times that he was only alive through his habit of never giving up! His spirit was so elastic, that whatever circumstance might make it bend for a moment, it would spring back into the old shape, with the old flash, ready to fight on to the last. He fixed on Coblenz as the place most suitable for his new residence, and, dear lover of his country as he was—for he thought there was no land like England—he went manfully to eat the bread of sorrow in a strange land, determined to eat that bread honourably, and equally determined to get all the fun he could out of his lot, and the people amongst whom his lot was cast. He remarks at Ostend, "'I am werry content with my wittles in this here place," as the Apprentices say.' Hood was always content with his 'wittles' in any place.

He passed over in a storm, which wrecked eleven vessels off the coast of Holland. He nearly blew his last bubble; it was, as he says, a 'squeak for the Comic' on this occasion. On landing he looks on the bright side of his prospect. 'We are not transported even for seven years, and the Rhine is a deal better than the Swan River,' he writes to his wife. 'There are three little rooms, one backward, my study that is to be, with such a lovely view over the Moselle. My heart jumped when I saw it, and I thought, "There I shall write volumes." I want but you and my dear boy and girl to be very happy and very loving.' Hood

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was soon at work, with his humour in full flow for the 'Comic;' making rare fun of the Germans, and playing off practical jokes on his wife and friends; a very spirit of mischief, longing and listening with both ears for news from home, like any 'Exile of Hearin,' his swallow often inclined to migrate England-ward when he thought of beef and porter; supplying curious pictures of his foreign friends, and painting fancy likenesses of those at home with fun in every feature for their special amusement—seeing that it 'were ungracious to write merrily for the public, and vent the blue devils on my private letters.' Hood's account of their difficulties with the German language, and how they got on with the aid of Dictionary and *contradictionary*, is richly ludicrous.

Our Author appears to have soon found that living in Germany was not so cheap as he had fancied, nor was the climate so suitable as he had fondly imagined. Then the doctors were *leeches* indeed in those days; they bled unmercifully. Nature kept him thin and spare, so that he might always be in fighting condition, but the doctors did their best to reduce him still further. 'I heard the other day,' he writes, 'of a man who had fifty-five leeches on his thigh. The man who bled me, and there are several bleeders here, told me he had attended eighty that month! One of their blisters would draw a waggon.'

Under the most disheartening circumstances Hood wrote on and on, doing a great deal of work, and feeling that he only wanted health to do all! The scratch of his pen was heard day by day in his little apartment. With his dear ones at his side, he said, his pen would gambol through the Comic like the Monkey who had seen the World. And when they were in bed and the house was still, the pen went on far into the night. Many a time must he have realized his own description of the swimming brain, heavy eyes, and aching head of the poor Seamstress of his 'Song,' looking, as he said, more like the Rueful Knight than a professor of the Comic. And each season the 'Comic' came out with its broad grins and laughter from *year to year*, delighting young and old; few even suspecting the private tragedy that preceded the merry farce in public. When he could find nothing in persons or places round about him to tickle his fancy, Hood seems to have had the extraordinary power of taking up his pen and tickling himself until he laughed so heartily that he set all the world laughing too, and so he kept up the comedy with immense success, his coughs and fits of blood-spitting only looking like the results of excessive laughter.

Hood

Hood soon discovered how much he had lost in leaving English air. The summer and winter at Coblenz were killing him between them, so he left the Rhine without regret, his chief memories being of illness, suffering, and vexation of spirit. He now removed to Ostend, which seemed so much nearer home; he did not mind the sea between; *that* he could look upon as a part of England. Here we find him again busy at his old work of spinning new illusions, fast as time could destroy the old ones. He was delighted with the place, as he always tried to be with every place and everybody and everything. Yet for him it was one of the worst in the world; miasmatic and full of fever; the earth in a continual cold sweat; and what with its 'carillons and canals' the country was 'wringing wet.' We are almost annoyed with his contentedness. He actually learned to like Ostend, which was killing him by inches.

Hood's kind friend, Dr. Elliot, was very urgent for his return to England, and eventually he came home, the Doctor undoubtedly being the means of preserving Hood's life for a few more years. In 1840 the letters are dated 'Camberwell,' and we find the wit making fun of his very low condition, which followed a more than usually severe attack of illness. He is thankful for a filter, as he feels too *thin* to drink *thick* water. He has become a Pythagorean, not only in his diet but his feelings, and wonders how any one can eat meat! He is a teetotaller, too; but, 'for all my temperance, nobody gives me a medal! One hot evening in the summer, as I walked home, I could have murdered an old fishwoman who stood drinking a pot of porter *out of the cool pewter*. Why couldn't she drink it in the taproom, *out of my sight?*'

On the death of Theodore Hook, in 1841, Hood was offered the editorship of the 'New Monthly Magazine,' which he accepted, at a salary of 300*l.* per year, independently of the remuneration for his own articles. This gleam of sunshine, with its promise of settled prosperity, had a radiant effect for the time on poor Hood's health and spirits. He removed to a more pleasant house at St. John's Wood, where he had his cosy little parties of literary friends, and was better than he had been for many years. We meet him at a dinner given to Mr. Dickens, the latter hinting at the great advantage of going to America for the pleasure of coming back again. Hood was deaf; he could scarcely call himself stone deaf, and he found Tom Landseer 'two stone denser.' Upon his own health being drunk, Hood explained that a certain trembling of his hand was not from palsy or ague, but

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an inclination in his hand to shake itself with every one present. At this time he was working for the 'New Monthly' merrily as a bee, making honey while the sun shone; his lightheartedness and improvement of health culminating in a second visit to Scotland.

In the Christmas number of 'Punch' for 1843\* appeared the 'Song of the Shirt.' For the first time Hood really caught the ear of the world as a singer. He was astonished at its popularity, and touched by hearing the song sung by poor creatures in the streets to a rude air of their own adaptation. Mrs. Hood, when folding up the packet for the press, had said, 'Now, mind, Hood, mark my words: this will tell wonderfully; it is one of the best things you ever did.' Hood's connexion with the 'New Monthly' soon ceased, and he determined to start a Magazine of his own. It was to be a sort of monthly instead of yearly 'Comic,' with more serious literary aims. The prospectus promised that it should try to be merry and wise, instead of being merry and otherwise. There was to be good news for the teetotallers in a 'total abstinence from stimulating topics and fermented questions.' As for politics, the editor professed not to know 'whether a Finality Man meant Campbell's Last Man or an undertaker; whether Queen Isabella's majority was or was not equal to Sir Robert's; or if the shelling the Barcelonese was done with bombs and mortars or the nutcrackers.'

'Hood's Magazine' appeared on the 1st of January, 1844, supported by many friends, and met with a warm welcome from the public. Unfortunately, there seems to have been a flaw in most of Hood's business arrangements; and in this instance the proprietor, who had been speculating on the strength of the name, had not capital to carry on the Magazine to success. This was the first blow for Hood and his new venture. It was followed by various others. His health now began to fail more decidedly than ever, and the shadows grew darker and darker as this year passed on to its close. Yet the poor fellow never wrote nobler poetry than at this time. His contributions to the Magazine include the 'Haunted House,' the 'Lady's Dream,' and the 'Bridge of Sighs.' He made his most passionate appeals on behalf of the needy and oppressed. He never wrote more brightly than in his witty, genial letters to the little Elliots,

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\* We observe with satisfaction that a re-issue of our pleasant friend 'Punch' is in progress. It will preserve much that we would not willingly let die.

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when at his best he was suffering acutely all day, and all night his head, 'instead of a shady chamber, was like a hall with a lamp burning in it.' Towards the end of the year Sir Robert Peel proposed to Her Majesty that a pension of 100*l.* a year should be conferred on Thomas Hood. This was granted, but too late to be of much use in restoring him to health. He had silently pleaded for rest from labour for many a month past, and touchingly as ever he pleaded the cause of the poor; but he had to work on from one break-down to another, until the last break-down was fast drawing near. More than once had he been so close to 'Death's door, he could almost fancy he heard the creaking of the hinges;' and now it stood wide open into the darkness straight in front of him!

The last Christmas he spent in this world was memorable to his children chiefly from the fact that, while the merry season came round smiling and happy as usual, the once sprightly soul was saddened at last; the brilliant wit could not get up the accustomed little pyrotechnics of flashing mirth to illuminate the family rejoicings. The cheerful spirit that had borne up so long and struggled so bravely was beaten and broken now. Tears came into all eyes to see that he 'scarcely attempted to appear cheerful.' His work was done; he had taken to his bed for the last time. He was resigned and serene, as old and loving friends gathered round for a parting pressure of the hand, and smiled as the many tributes of affection were sent to him by strangers; amongst other tender tokens of kindness were some violets from the country, sent by a lady who had heard that he loved the perfume of these little flowers. One night his mind was wandering somewhat, and in a voice ineffably pathetic he repeated some lines of the Baroness Nairn's (not Burns's, as the editors of the 'Memorials' seem to think) 'Land o' the Leal,' beginning, 'I'm wearin' awa', Jean.' But, generally, he was remarkably calm, and on his features lay a solemn beauty of repose.

Spring came with her balm and beauty, and he longed for the soft, warm air and the pleasant sunshine, turning often and eagerly toward the window. He said once, 'It's a beautiful world, and since I have been lying here I have thought of it more and more. It is not so bad, even humanly speaking, as people would make out. I have had some very happy days while I lived in it, and I could have wished to stay a little longer. But it is all for the best, and we shall all meet in another world.' As the last hour came, he fondly and tenderly blessed his children, and, clasping the hand of his wife, said, 'Remember, Jane, that I forgive all—  
*all,*

*all*, as I hope to be forgiven.' They heard him whisper faintly, 'O Lord! say, Arise, take up thy cross, and follow me.' His last words were, 'Dying! dying!' as if glad to realise the rest that was implied in them. On Saturday, at noon, May 3rd, 1845, the headache and the heartache were over; the throbbing brow was quiet for the long rest under the sod of Kensall Green Cemetery. Thomas Hood, the man of many sufferings and most patient spirit, had passed on his way through the valley of the dark shadow, lighted by the sunshine of a heart at peace. His faithful wife, who clung so to him in life, was not long divided from him in death. In the language of an old poet, there were but eighteen months of wooing, and the grave became their second marriage-bed:—

'Death could not sever man and wife,  
Because they both lived but *one* life.  
Peace! good reader, do not weep!  
Peace! the lovers are asleep.  
They, sweet spirits, folded lie  
In the last knot that Love could tie.'

After long struggling with the storms, and many tossings amongst the billows of life's sea, poor Hood went down. Many a wild wave had burst over him and his frail bark; still they rose and righted from each shock, bearing right gallantly on. And, just as he seemed about to touch land mentally, and win a firm foothold whereon to stand, and do yet higher work; just when the harbour was in sight, and a multitude of friends stood on shore ready and eager to welcome the brave sailor, down he went in sight of them and home! We see by his letter to Sir Robert Peel, and by the earnest way in which he poured out his latest life, that a new purpose was dawning and growing in his soul. This purpose would undoubtedly have gathered up the sparkling particles of wit and fancy into singleness of mental movement and oneness of result, as the magnet gathers up the scattered filings of steel. We see likewise that his taste was chastening to the last. In the 'Memorials' are some lines, in another measure, containing an image which was not wrought into the 'Bridge of Sighs':—

'The moon in the river shone,  
And the stars some six or seven—  
Poor child of sin, to throw it therein  
Seemed sending it to heaven.'

The conceit of getting to heaven in that reflected way, which  
may

may be found in an early English minor poet, was too pretty for his maturer taste. All he asked was a little time. As Mozart, when dying, began to see what might be done in music, so Hood caught a glimpse of the glorious possibilities which he had not the strength left to grasp. What he gave us was the fruit of haste and hurry. Time was not allowed for him to bring forth the 'ripened fruits of wise delay.' He had also to eat so much of his corn in the blade, he could not garner up for us the full harvest there might have been. Yet he did good work for the world :—

'He gave the people of his best;  
His worst he kept, his best he gave.'

Whilst sitting himself in darkness, he turned the sunniest side of his nature towards his fellow man. He suffered much, and suffering added its 'precious seeing' to his eye. His own sorrows only made him all the more sensitive and tender to those of others.

The life of this man is a touching story; all the sadder at times for the uncomplaining meekness of spirit with which the burthen was borne; and saddest of all by reason of the chirping cheeriness, the flashes of humour, that play with their heat lightning about the gloom of the gathering night. Yet it would be unbearably ghastly in many of its physical details of the sick-room and the sweat of agony, the weary toil and slow torture, but for the luminous smile of his humour, which gives a spiritualised expression to the racked features of a worn, tormented life. We are thus made aware of the presence of a potent spirit, that conquers when the poor, thin, diaphanous body fails; of an immortal triumphing over the ills of mortality, and transfiguring them till they become the veriest passing appearances, whilst it remains the fixed and enduring reality. The pages that read like a doctor's diary all pass away, and there lives only the image of a beautiful patience smiling from out the pain. We meet with many a touch of nature which, as Coleridge said of Shakespeare, will make those who love the man lay down the book, and love him over again.

In closing the 'Memorials' of Thomas Hood's life, his children, who have performed a filial duty gracefully, are anxious to defend his memory against those foolish persons who mistook his wit for wickedness, his genial philosophy for irreligion; but there is no need. Hood's religion was of the practical kind, that stays one in life, and serves one in death. He was one of those who are so shy on the subject that they find it an insurmountable  
difficulty

difficulty to get their feelings in this vital matter published through the customary forms. His religion breathed through all his life, work-days as well as Sundays. It ascended like incense in his own household, sweetening the sick chamber, enriching the young life of his little ones, hallowing his love, and passing with the force of tenderest pity into his poetry. It enlarged his heart spiritually, until his charity could embrace those whom the world had cast out, and those for whom the sects were too narrow.

Sydney Smith was a tolerant man, yet he confessed to one little weakness—a secret desire to roast a Quaker. Hood also was tolerant, but he too had his weakness; he would roast the Pharisees and the ‘unco guid’ in their own conceit. But he held sacred all that was high and holy. He was none the less religious because he hated cant and warred against it; because he had no sympathy with that Scottish clergyman who was horrified at seeing people walking the streets of Edinburgh on a Sunday, smiling and looking perfectly happy. There was no blasphemy, no unbelief, no *wanton* wile in the wit of Thomas Hood. The last lines he ever wrote show us an aspect of the man facing eternity, and lead us to believe that he had found his exaltation on the cross of suffering, knowing that of all this world’s highest places it could lift the spirit highest heaven; and that when he felt the hand of ‘one standing in shade’ was upon him, he likewise felt the transfiguring touch of One standing in light.

‘Farewell Life! My senses swim,  
And the world is growing dim;  
Thronging shadows cloud the light,  
Like the advent of the night.  
Colder, colder, colder still  
Upward steals a vapour chill—  
Strong the earthy odour grows—  
I smell the mould above the rose.

‘Welcome Life! The spirit strives!  
Strength returns, and hope revives;  
Cloudy fears and shapes forlorn  
Fly like shadows at the morn,—  
O’er the earth there comes a bloom—  
Sunny light for sullen gloom,  
Warm perfume for vapour cold—  
I smell the rose above the mould.’

To make a portrait of Thomas Hood were scarcely less  
difficult

difficult than the painter found it to catch the expression and fix the features of Garrick's face. He can laugh on one side and cry on the other, and it is not easy to tell his laughter from his crying. Are those tears in his eyes, or only the dewdrops of mirth? Is that a furrow of pain, or a pucker of suppressed fun? We set them down for one thing, and they are instantly changed into the other. 'A man of great heart and bright humours, my masters, and a sorrow that sits with its head under one wing.' A mind of many features, with as continual changes of expression as the ripples of a breeze-tinted summer sea. A spirit of earnestness hard at work; a spirit of quaint pleasantry as assiduously at play. A gentle, genial nature, in which the most opposite elements were kindly mixed; many-sided, and curiously felicitous at most points. He somewhere speaks of the Nine Muses dwelling together in one house for the sake of cheapness. His was the one house, where but poor entertainment they got for the rare entertainment they gave. Wit never before assumed such numerous shapes, to spring so many sudden surprises,—more especially in the way it passes into pathos. His gayest laughter somehow touches the underlying melancholy of life, and leaves a sad chord thrilling long after the laughter has done ringing. In the midst of the mirth all is changed in the twinkling of an eye, and you are hood-winked into tears. The pungency of much of Hood's humour is pathos. If we consider the state of health and the outward environment in which the wit flashed and humour flowed, it is inexpressibly touching, as the Fool's labouring to out-jest the crying sorrows of poor old Lear. Some of his richest jewels of wit are his own tears set glittering in fictitious sunshine; the world preferred them thus pleasantly lighted up. And how splendidly they twinkled and shone when relieved by the sombre background of such a life! His grotesque gaiety is often the result of his endeavours to hide the suffering—the piquant wry faces he showed in making fun of his own troubles. Pain will supply puns, and cramp becomes comic if Hood has it. Then, how delightful it is if Mr. Merri-man will but really cry! What fun to see the big drops come hopping down the painted puckered cheek! What a merry twinkle there is in the tears, and how pointed! What a glorious grin in the grief! Who thinks that it may be real? Who cares whether a dead child may be lying behind the curtain? Who, while his own sides are shaking with laughter, surmises that the clown's may be trembling with weakness? Who knows how much of the irresistible antic and grimace is owing to a peculiar way he

'has

has of silencing the kennel of cares that is all full cry in his heart?

Hood had, as he himself said, to be a Lively Hood for a livelihood. He lived under the stern taskmaster Necessity, who made him laugh for his living, and only the ear of the thoughtful will understand that this laughter is often the Humorist's way of crying. 'Who,' he asks, 'would think of such a creaking, croaking, blood-spitting wretch being the Comic?' Yet, with the blitheness of a grasshopper he goes on trying to turn the *creaking* into what sounds to us like the cheeriest chirping. Give him but the slightest gleam of sunshine and his spirits *will* be dancing, even though the bit of vantage-ground be small as the point of Thomas Aquinas' needle. His life ebbed and ebbed day by day in producing a few pretty shells and pebbles for the curious in such matters. Nevertheless, he picked them up and presented them gaily; breathing no word of complaint about the cost. He lived and laughed with Death in sight for years. Indeed, some of his grim jokes look as though he had poked the bony skeleton in the lean ribs with them, when it came nearer than usual, and they were grotesquely ticklesome enough to delay the uplifted dart, and make Death pass him by with a broader grin than ever.

In the midst of illness he could thus give us his laughing philosophy:—

'You will not be prepared to learn that some of the merriest effusions in the forthcoming numbers have been the relaxation of a gentleman literally *enjoying* bad health—the carnival, so to speak, of a personified *jour maigre*. My coats have become great-coats, and by a bargain worse than Peter Schlemihl's, I seem to have retained my shadow and sold my substance. In short, as happens to prematurely old port wine, I am of a bad colour, with very little body. But what then? That emaciated hand still lends a hand to embody in words and sketches the creations or recreations of a Merry Fancy: these gaunt sides yet shake as heartily as ever at the grotesques and Arabesques and droll picturesques that my good genius (a Pantagruelian familiar) charitably conjures up to divert me from more sombre realities. How else could I have converted a serious illness into a comic wellness—by what other agency could I have transported myself, as a Cockney would say, from *Dullage* to *Grinnage*? It was far from a practical joke to be laid up in a foreign land, under the care of physicians quite as much abroad as myself with the case: indeed, the shades of the gloaming were stealing over my prospects; but I resolved that, like the sun, so long as my day lasted, I would look on the bright side of everything. The raven croaked, but I persuaded myself it was the nightingale: there was the smell of the mould,

mould, but I remembered that it nourished the violets. However my body might cry craven, my mind luckily had no mind to give in. So, instead of mounting on the black long-tailed coach-horse, she vaulted on her old hobby that had capered in the morris-dance, and began to exhort from its back. "To be sure," said she, "matters look darkly enough; but the more need for the lights. Remember how the smugglers trim the sails of the lugger to escape the notice of the cutter. Turn your edge to the old enemy, and mayhap he won't see you." The doctor declares that anatomically my heart is hung lower than usual—the more need to keep it up! Never meet trouble half-way, but let him have the whole walk for his pains. I have even known him to give up his visit in sight of the house. Besides, the best fence against care is a Ha! Ha!

This antithesis of Hood's life has, we repeat, two aspects. He makes merry with a mournful lot, but the sadness will peer out at unexpected times, and in unlooked-for ways. The secret hidden in his heart turns on him unawares. He sighs unconsciously. Thus his pathos is produced as unexpectedly and with the same sudden turns as his wit, and it comes with all the more force because not forced. For example:—

'I remember, I remember,  
The fir-trees dark and high;  
I used to think their slender tops  
Were close against the sky.  
It was a childish ignorance,  
But now 'tis little joy  
To know I'm farther off from heaven  
Than when I was a boy.'

Again:—

'I saw thee, lovely Inez,  
Descend along the shore,  
With bands of noble gentlemen,  
And banners waved before!  
And gentle youth and maidens gay,  
And snowy plumes they wore;  
It would have been a beauteous dream,  
If it had been no more.'

It is remarkable that, whereas the wit and humour of Hood are not the unconscious overflows of health and happiness, he almost succeeds in making the reader believe they are. The fun and frolic look so like the playful extravagances of high animal spirits that we cannot help taking an interest in their aimless romping, like that which we take in the gambols and sport of domestic animals. Only since his death do we see,



see, as on the stage of a theatre, both sides of the thin partition which divided his sorrows from our mirth; how carefully he kept his miseries from the public gaze, and laughed his sufferings down with his merry make-believe. It must have been a spirit of rare quality that in the grip of bodily anguish and mental torture, even when almost sick unto death, could forget all that pertains to self and turn the very pains of its own life into pleasures of literature for others. Dr. Johnson has said, in his absolute way, that all mankind are rascals when they are sick. We all know, and our wives appreciate, the peevish tendency which the Doctor dealt with too sweepingly from the sick-nurse point of view. But Hood's sweetness of nature and serenity of temper were enough to upset the dictum, as they would have upset the Doctor, who would have had no patience with *such* patience under the circumstances.

When Thor and his companions arrive at Utgard they are told that no one is permitted to remain there unless he understand some art and excel all other men in it. Thomas Hood, in his lowest range, has a claim to his place in the literary Walhalla. He excelled all other men in the art of twisting words, of bringing into sudden contact two opposite ideas which at a touch should explode in laughter, and of making those droll 'Picturesques' which we may call pun-pictures. Here he was unapproachable. It is no great triumph, and we only point it out to remark that whereas the word-wit of Hood's followers and imitators is most flat, stale, wearisome, and unprofitable, that of the master keeps its freshness still. It does not sicken or fade. It is not gaslight gold that turns to daylight tinsel. The professed despiser of puns, the 'verbal unitarian,' will own that whereas the others have discovered a trick, Hood alone works the genuine miracle. The reason of this will be found in the depth of nature that lay beneath the sparkling surface of the man, breathing an aroma of sweetness through his poetry, purifying and exalting his humour, and spiritualising that kind of wit which others are apt to make so vulgar. Indeed, his wit is the merest wild flower that waves in the flowing stream, swaying this way and that, to breeze and ripple, with the most 'tricksy' tendencies, only it is perfect in kind, and serves to draw us near enough to see the deeper nature wherein lies the richer wealth. He had to take the eye of the world with his wit before he could succeed in touching its heart with his poetry.

Many are the temptations for Wit and Humorist to win the laugh on forbidden grounds, it is so easy to make merry in low life.

life. But Thomas Hood is never coarse, he never penetrates the sanctuaries of human feeling with the grin of irreverence. He sets up no loud horse-laugh at humanity's mishaps and back-slidings. Whatever mocking mask he may wear for the time, we know there is a kindly face and a gentle heart behind it. He has but little of the bitterness of satire; none of its burning bitterness. Nor can he mock at humanity by pointing with the finger of scorn to the ghastly skeleton which underlies the bloom of rosiest flesh; nor does he torture it by thrusting that finger into the old incurable sores. He has no cynical smile for our ever-recurring difficulties in this old battle-field of Good and Evil, but always a word of cheer for the Right. He punctures no new wounds with caustic in his quill. Nor does he ever try to take payment for his own sufferings out of the miseries of others, having nothing of that feeling which induced the satirist Swift to keep his own birthday as a day of mourning. He has no scoffs for his inferiors; no rage against superiors; owes the world no grudge. The state of his health, no doubt, gave him his tendency to mirthful moralising in the graveyard. He lived with Death in sight for years, and grew familiar with his imagery. He sees that 'Death himself cuts a caper in mockery, and the very skull of man wears a grin commemorative of the farcical passages in the serio-comic entertainment' of the life that is over.

Hood accomplished the most marvellous series of changes ever rung on the bells of the jester's cap. The most astonishing puns, quips and cranks, and sudden turns and endless surprises, follow in bewildering succession, or rather they come crowding in all at once in the most natural way. He used to say that he thought all ideas entered his head upside down. Yet with him this seems to have been their right way of going, and these dancing figures when inverted made all the more fun. His mind continually caught the light at the oddest possible angle, and its reflections and refractions made a ludicrous change in the most familiar features of things, and shed a *sparry* play of light and colour upon the dulllest common place. Like his own Puck in the 'Plea of the Midsummer Fairies,' 'blithely jesting with calamity,' and strangely 'reflecting their grief aside,' he turns their 'solemn looks to half a smile,'

'Like a straight stick shown crooked in the tide.'

It is said that his own long serious face and quiet demeanour formed an excellent foil to his fun. In like manner he has  
the

the way of introducing the most startlingly innocent-looking puns, and other ticklish twins, with great apparent artlessness and absence of effort. He is always playing off his tricks on the most knowing and acute reader, as he did with that piece of sweet simplicity his wife; the success being all the greater because you were determined to be up to him this time. With the utmost seeming single-mindedness of purpose does he carry on his double-dealing. For example—

‘And Christians love in the turf to lie,  
Not in watery graves to be;  
Nay, the very fishes would sooner die  
On the land than in the sea.’

Who would look for any droll duality in a simple straightforward statement like that? Or, in another instance, who would suspect his plausible way of characterising an Eastern city,

‘Where woman goes to mart the same as mangoes,’

which needs the second-sight to see it? In his lament for the decline of chivalry, how demure is the look of that *double entendre*—

‘And none engage at turneys now  
But those that go to law.’

Sometimes the unexpectedness is so perfect, and the odd turn so queer, you are completely left in the lurch, as when, in speaking of a storm at sea, he says ‘The vessel occasionally gave such an awful lurch, that I thought we should have been left in it.’ And once the twist of the thought is so puzzling, it is like turning the head round suddenly to see something, and getting fixed by a crick or cramp in the neck. It occurs in the ballad of ‘Sally Brown, and Ben the Carpenter.’

‘And then he tried to sing “All’s well,”  
But could not, though he tried;  
His head was turned, and so he chewed  
His pigtail till he died.’

Hood is very successful in unravelling the perplexities of a mind too full of matter—if the shade of Berkeley will excuse the expression—or ignorance in a state of spontaneous combustion, trying to wreak itself on language. Some very droll humour will be found in his many mock-epistles, purporting to be from servants running ‘all ways to once’ in their frantic endeavours to express

all their meaning forthwith. The more bewildering the way for them, the clearer case is it for him; the more inadequate their utterance, the more perfectly it serves his purpose; the more they are racked in feeling, the more is language racked by him. A very forcible description of Holland is thus struck out in one of Martha Penny's letters. 'Howsomever here we are thank providens on dry land if so be it can be cauld dry that is half ditchis and cannals, at a forin city, by name Rotter-D—m. The King lives at the Ha-gue and I'll be bound it's haguish enuf for Holland is a cold marshy flatulent country and lies so low they are only saved by being dammed.'

A great deal of Hood's wit is apparently purposeless; the natural result of his habit of instantly detecting the oddest coincidences in the world, and spying out some point of likeness and affinity in the remotest opposites—extremes always chancing to meet in his mind as in his life. Yet it was not without a purpose if it served to supply the waiting mouths that turned to him for bread. He was no diner-out, whose flashes of manufactured merriment lighted up the tables of the rich and great with laughing-gas. But his happy whimsicalities, his graceless puns past all pardon, were carefully booked and sent to market to supply his own dinner-table; his own 'good things' were duly exchanged for the world's. When dying, propped up with pillows, his long white face more serious-looking than ever, so thin and spare of body that his spirit appeared to be shining through its sheath, he was found to be toiling away, cheery as Mark Tapley under his difficulties, putting into his last work all the funny thoughts and humorous hints he could find on a bed of death, with the view of leaving as much bread as possible in the cupboard for the dear ones when their bread-winner was gone. Thomas Hood *could* be witty to very noble purpose—witty in pleading the cause of authors, as in his petition for Copyright, where he urges with very uncommon common sense that 'to be robbed by Time is a sorry encouragement to write for Futurity;' that 'it must be an ungrateful generation which, in its love of cheap copies, can lose all regard for the *dear* originals;' that 'when your Petitioner shall be dead and buried, he might with as much propriety and decency have his body snatched as his Literary Remains;' that 'as a man's hairs belong to his head, so his head should belong to his heirs; and the very law of nature protests against an unnatural law which compels an author to write for everybody's posterity except his own.' And in his 'Ode to Rae Wilson,' he pleads the cause of toleration and genuine religion

religion as effectively as though he never saw double in his life, and only fired single-barrelled meanings. For example—

‘Mild light, and by degrees, should be the plan  
To cure the dark and erring mind ;  
But who would rush at a benighted man,  
And give him two black eyes for being blind ?’

Or, again—

‘Spontaneously to God should tend the soul,  
Like the magnetic needle to the pole ;  
But what were that intrinsic virtue worth,  
Suppose some fellow, with more zeal than knowledge,  
Fresh from St. Andrew’s College,  
Should nail the conscious needle to the north ?’

Many are the pages of Hood’s writings we might point to and show that, when the sparkling particles of his wit have had their dance, they settle down into a rich precipitate of golden wisdom. But, even at the lowest range of his humour, Hood is alive to the least touch of nature. He has a quick sympathy with humanity trying to get expression under grotesque difficulties. Any genuine human affection wins his respect. He never despises it however much he may laugh. In one of his pieces called a ‘Singular Exhibition at Somerset House,’ there is a pleading ground-tone of seriousness taking part all the while against the imp of mirth and mischief that is so provocative.

‘No Cow ! there an’t no Cow, then the more’s the shame and pity !  
Hang you and the R. A.’s, and all the Hanging Committee !  
No Cow—but hold your tongue, for you needn’t talk to me—  
You can’t talk up the Cow, you can’t, to where it ought to be—  
I haven’t seen a picture high or low, or any how,  
Or in any of the rooms to be compared with David’s Cow ! [Wards,  
You may talk of your Landseers, and of your Coopers, and your  
Why hanging is too good for them, and yet here they are on cords !  
They’re only fit for window frames, and shutters, and street doors,  
David will paint ’em any day at Red Lions or Blue Boars,—  
Why Morland was a fool to him, at a little pig or sow—  
It’s really hard it an’t hung up—I could cry about the Cow !  
But I know well what it is, and why—they’re jealous of David’s fame,  
But to vent it on the Cow, poor thing, is a cruelty and a shame.  
Do you think it might hang bye and bye, if you cannot hang it now ?  
David has made a party up, to come and see his Cow.  
If it only hung three days a week, for an example to the learners ;  
Why can’t it hang up, turn about, with that picture of Mr. Turner’s ?  
Or

Or do you think from Mr. Etty you need apprehend a row,  
 If now and then you cut him down to hang up David's Cow?  
 I can't think where their tastes have been, to not have such a creature,  
 Although I say, that should not say, it was prettier than Nature;  
 It must be hung—and shall be hung, for Mr. H——, I vow,  
 I daren't take home the catalogue, unless it's got the Cow!  
 As we only want it to be seen, I should not so much care,  
 If it was only round the stone man's neck a-coming up the stair,  
 Or down there in the marble room where all the figures stand,  
 Where one of them three Graces might just hold it in her hand—  
 Or may be Baily's Charity the favour would allow,  
 It would really be a charity to hang up David's Cow.  
 We haven't no where else to go if you don't hang it here,  
 The Water-Colour place allows no oilman to appear—  
 And the British Gallery sticks to Dutch, Teniers, and Gerrard Douw,  
 And the Suffolk Gallery will not do—it's not a Suffolk Cow:  
 I wish you'd seen him painting her, he hardly took his meals  
 Till she was painted on the board correct from head to heels;  
 His heart and soul was in his Cow, and almost made him shabby,  
 He hardly whipp'd the boys at all, or help'd to nurse the babby.  
 And when he had her all complete and painted over red,  
 He got so grand, I really thought him going off his head.  
 Now hang it, Mr. Hilton, do just hang it any how,  
 Poor David, he will hang himself, unless you hang his Cow.—  
 And if it's inconvenient and drawn too big by half—  
 David sha'n't send next year except a very little calf.'

The brilliancy and versatility of Hood's wit have somewhat dimmed for many eyes the glowing lights and graces of his serious fancy. Readers are apt to forget how truly and richly the poet was endowed. Some of his early poetry has a fresh breath of the old English pastures, and in various ways shows a touch of kinship to the Elizabethan men. He shared with Keats in the modern return to the youthful health and poetic luxury of our earlier literature, and came back with something of that poet's love for a flashing phrase, a purple word, a quaint conceit. He tried a variation of the same theme as Keats's 'Lamia,' wherein he holds his own by some subtle touches of true poetry. His creation, however, has more flesh and blood, and does not rise airily like Keats's golden exhalation of the dawn or bubble of the earth. Some of his little lyrics have the gay grace and lilt of the old dramatists when they wrote in the lyrical mood. The 'Plea of the Midsummer Fairies' is an exquisite poem; the Muse that inspired it was a 'delicate Ariel' indeed. It wafts us into real fairy-world, where we find the wee folk,

folk, the pretty children of the world's childhood at home. Here are the dainty diminutives, the lovely small *underbodies* that can swing on a flower, or float on a leaf; a pretty importunate crowd of kindly little mimic humanities, moving in quaint attire and sylvan colours, with the quickness of sparkles of sunshine, pleading, with a tiny tinkle of tender speech, to be rescued from the destroyer Time, and allowed a little room in our world, and they will fill it with the largest life of good possible to their frailness; for 'we are very kindly creatures,' they urge; 'we soothe all covert hurts and dumb distress.'

'And we are near the mother when she sits  
Beside her infant in its wicker bed;  
And we are in the fairy scene that flits  
Across its tender brain: sweet dreams we shed,  
And whilst the tender little soul is fled  
Away to sport with our young elves, the while  
We touch the dimpled cheek with roses red,  
And tickle the soft lips until they smile,  
So that their careful parents they beguile.'

One relates the pageant tricks that he and his merry mates played to beguile a poor wretch from thoughts of suicide.

'Therefore as still he watched the waters flow,  
Daintily we transformed, and with bright fins  
Came glancing thro' the gloom; some from below  
Rose like dim fancies when a dream begins,  
Snatching the light upon their purple skins;  
Then under the broad leaves made slow retire:  
One like a golden galley bravely wins  
Its radiant course,—another glows like fire,—  
Making that wayward man our pranks admire.'

And so they wiled him away from death.

Puck, caught in the midst of his freakish fun, urges the harmless life of himself and Robin Goodfellow:—

'Tis we that bob the angler's idle cork,  
Till e'en the patient man breathes half a curse;  
We steal the morsel from the gossip's fork,  
And curdling looks with tickling straws disperse,  
Or stop the sneezing chanter at mid-verse.'

But the pleading is in vain. Titania's self, with all her beauty and her tears, fails to touch grim Time, bent on doing his work; when lo! a timely apparition glides between the stern  
destroyer

destroyer and the doomed fairy band. This is Shakespeare, though he seemed

‘A mortal at mere hunt  
For coney, lighted by the moonshine cold,  
Or *stalker of stray deer*, stealthy and bold.’

The pretty crowd felt secure in the shadow of this interposing power, and they were rescued to live on safe in the immortality conferred by him in a certain ‘*Midsummer Night’s Dream*.’

Hood’s ‘*Haunted House*’ is one of the most perfect pictures of still life to be found in all poetry. It is true and graphic, as though the writer had spent years on years in some such desolate ruin, on the shadowy borderland of life and death; peered into all the dim and dusty nooks, with the vision strained to that preternatural acuteness which takes note of the minutest details of physical circumstances; had lain awake o’ nights, and felt the phantoms flitting through the gloom, or caught glimpses of them crossing the moon-rays; had known all the mute significance of the conscious silence, and listened until there came from out it those strange sounds that underlined the stillness, as it were, and made it more boding and fearful! It required the finest mental apprehension, the white heat of imagination, the most sensitive perception, to take such a picture as this, wherein the indefinite is caught and fixed so definitely; the dim and shadowy is turned to tangible reality with a most startling distinctness; the abode of death, darkness, and doom is quickened and set swarming with ghastly life; and a living lonely human being is thus isolated and suspended betwixt the spirit-world of the air overhead and the reptile-world of crumbling ruin at the feet:—

‘The centipede along the threshold crept,  
The cobweb hung across in mazy tangle,  
And in its winding-sheet the maggot slept,  
At every nook and angle.  
The key-hole lodged the earwig and her brood,  
The emmets of the steps had old possession,  
And marched in search of their diurnal food  
In undisturbed procession.’

What a perfect sense of security from human invasion in that nest of earwigs, and what leisure is implied by the long, slow march of the ants!

‘Such omens in the place there seemed to be,  
At every crooked turn, or on the landing,  
The straining eyeball was prepared to see  
Some apparition standing!’

The



The dreary stairs, where with the sounding stress  
Of every step so many echoes blended,  
The mind, with dark misgivings, feared to guess  
How many feet ascended.'

Everywhere the place is haunted, and everything appears to feel the consciousness of crime. In a thousand ways the world of dumb things speaks, palpably enough, its knowledge of the mystery. The ancestral portraits on the walls are filled with no mere simulated life:—

'Their souls were looking thro' their painted eyes  
With awful speculation.'

At the sound of the door creaking on its rusty hinges it seems as though the murder would out at last! The screech-owl appears to 'mock the cry that she had heard some dying victim utter!'

'A shriek that echoed from the joisted roof,  
And up the stair and further still and further,  
Till in some ringing chamber far aloof  
It ceased its tale of murder!'

The wood-louse dropped and rolled into a ball,  
Touched by some impulse occult or mechanic;  
And nameless beetles ran along the wall  
In universal panic.

The subtle spider that from overhead  
Hung like a spy on human guilt and error,  
Suddenly turned, and up its slender thread  
Ran with a nimble terror.'

There was no human voice in the place to speak the tale of horror and amazement. Only every bit of red shone ominously vivid, as though it were self-lighted, and the 'Bloody Hand' pointed with prophetic hints to a chamber, across the door of which no spider hung its web, and not even a midge dare dance in the sunbeam when it fell there:—

'The Bloody Hand, significant of crime,  
That, glaring on the old heraldic banner,  
Had kept its crimson unimpaired by time  
In such a wondrous manner!

And over all there hung a cloud of fear;  
A sense of mystery the spirit daunted,  
And said, as plain as whisper in the ear,  
"The place is haunted!"'

Hood's novel of 'Tylney Hall' is worth reading, and will be read

read when our present popular sensation stuff is long forgotten. It contains one capital character, that of 'Unlucky Joe,' which might have been an early sketch from the hand of Mr. Dickens. Poor Joe, with his inevitable 'Fridays' and wallowings in the Slough of Despond, is a specimen of Hood's peculiar mixture. He is so sure that fate is dead against him, and so sick of his unlucky life, that 'if it pleased God Almighty to chuck down from heaven a handful of sudden deaths, you'd see me scrambling after one as hard as ever a barefoot beggar boy for a copper out of a coach window.' There are good hints in Mrs. Hanway, who reckoned it second only to the mortal sin that so horrified John Bunyan, to have let a sick gentleman go to heaven without having taken his physic; in Twiggs, the vulgar, who thought it strange that a man of his property could not have a fine day for his fête; and in the Baronet, a genuine bit of old English foxhunting nature, florid as a picture by Rubens; sound in heart and brain as in wind; a man that lived up to the traditionary mark, which was not low-water mark, and only died once.

Hood, we are informed, amongst other literary projects, thought of writing a set of Books for Children. It is to be regretted that he did not live to create such a child's world of fancy, fun and faerie as it must have been. He had a remarkable knack of getting into all sorts of small places, whether it was the insect world or fairy world, or the world of infantine humanity. Into the latter he would slyly creep, as it were on all-fours, in such unexpected ways as would pleasantly startle his small friends with shouts of laughter. He could always get to the heart of a child, however much he might bewilder its mind with the movement and glitter of his fun, which dazzled too much for the meaning to be quickly apprehended, filling the young imagination with a thousand sparkles of splendour, all alive as the dress of Harlequin.

It must have been a droll entertainment to have watched the child-face, and seen it lifted every now and then, with the eyebrows arched in wonder at what was coming next, and heard the 'Oh, Mr. Hood!' As a sample of his frolic with the little ones, and his way of playing with them and puzzling them, we turn over his letters to the children of his good friend, Dr. Elliot:—

'MY DEAR MAY,

'I promised you a letter, and here it is. I was sure to remember it, for you are as *hard* to forget as you are *soft* to roll down a hill with. What fun it was! only so prickly I thought I had a porcupine in one pocket, and a hedgehog in the other. The next time, before we *kiss* the earth, we will have its face shaved. I get no rolling

at St. John's Wood. Tom and Fanny only like *roll* and butter; and as for Mrs. Hood, she is for *rolling* in money. Tell Dunnie that Tom has set his trap in the balcony, and *caught* a cold, and tell Jeannie that Fanny has set her foot in the garden, but it has not come up yet. I hope we shall all have a merry Christmas. I mean to come in my most ticklesome waistcoat, and to laugh till I grow fat, or at least streaky. Fanny is to be allowed a glass of wine, Tom's mouth is to have a *hole* holiday, and *Mrs. Hood is to sit up to supper*. There will be such doings, and such things to eat! but pray, pray, pray, mind they don't boil the baby by mistake for a *plump* pudding.'

The next quotations are from Letters written to the Children at the seaside:—

'MY DEAR JEANNIE,

'So you are at Sandgate! If you should catch a big crab, with strong claws,—and like experiments—you can shut him up in a cupboard with a loaf of sugar, and see whether he will break it with his nippers. Besides crabs, I used to find jelly-fish on the beach, made, it seemed to me, of *sea-calves' feet*, and no *sherry*. There were star-fish also, but they did not *shine* till they were stinking. I hope you like the sea! I always did when I was a child, which was about two years ago. Sometimes it makes such a fizzing and foaming, I wonder some of our London cheats do not bottle it up and sell it for ginger-pop. When the sea is too rough, if you pour the sweet oil out of the cruet *all over it*, and wait for a calm, it will be quite smooth—much smoother than a dressed salad. Some time ago exactly, there used to be large white birds, with black-tipped wings, that went flying and screaming over the sea. Do you ever see such birds? We used to call them "*gulls*," but they didn't mind it.

'Well, how happy you must be! Childhood is such a joyous, merry time, and I often wish I was two or three children! And wouldn't I pull off my three pairs of shoes and socks, and go paddling in the sea up to my six knees!

'When I can buy a telescope powerful enough, I shall *have a peep* at you.'

So the rare pen goes romping on from one child's mind to the other; the tickling inquiries and funny information flowing from it with the most natural gradation, until, in the letter to the youngest, we have the crowning touches of nature, and a fine flash of imagination:—

'MY DEAR MAY,

'How do you like the sea? Not much, perhaps; it's "*so big*." But shouldn't you like a nice little ocean, that you could put into a pan?

'Have the waves ever run after you yet, and turned your little two shoes into *pumps* full of water? Have you been bathed yet in the sea,  
and

and were you afraid? I was, the first time; and, dear me! how I kicked and screamed!—or at least *meant to scream*, but the *sea, ships and all, began to run into my mouth*, and so I shut it up. Did you ever try, like a little crab, to run two ways at once? See if you can do it, for it is good fun; never mind tumbling over yourself a little at first. It would be a good plan to hire a little crab for an hour a day, to teach baby to crawl, if he can't walk, and if I was his mamma, I *would*, too! Bless him! But I must not write *on him* any more—he is *so soft*, and I have nothing but steel pens. And now, good bye! The last fair breeze I blew dozens of kisses for you, but the wind changed, and, I am afraid, took them all to Miss H——, or somebody that it shouldn't.

Of Hood's power to enter into the heart of a child, and measure the world through its eyes, his remark on the size of the sea is a felicitous illustration. It so admirably expresses that affection of the little one which seeks to embrace what it loves, and is not satisfied with the greater possessions and less power; while the description of the sea running, ships and all, into the youngster's mouth is overwhelming.

It is now some twenty years since Thomas Hood, with heart aching for the poor, sang his famous 'Song of the Shirt,' but its echoes have not yet died out of the minds of all good men and true women. Much floating, hazy sympathy for the lower classes—which may at all times be found amongst the real aristocrats—has since then been condensed, and fallen like refreshing rain from heaven to enrich the life of the poor, making many of the waste places blossom. Without any canting about the progress of our age, we may congratulate ourselves on living in a time when the wealthy and the high-born have a livelier sense of their responsibilities—think more of their duties than their dues—more of serving, less of compelling service, than in any time past. Still the day has not yet come when poems like these are no more needed to work with their finer particles in the mind of our nation; to kindle kindly thoughts, and keep the conscience quick, the ear open to the cry of suffering, the eyes clear to see the wrongs that are done to labour, under the sanction of Law, in the common light of day. The feelings to which these make appeal will always be necessary to supplement and soften the hard hearts of those who do not understand what Political Economy is, and are fond of claiming its sanction for the neglect of duty. The more perfect the societary arrangement, according to the Manchester ideal, the greater surely is our need of that humanity which, working by personal influences, can alone bring about any better relationship betwixt rich and

and poor. Many no doubt easily shook off the influence of Hood's startling midnight cry, which still rings in the ears of others, on behalf of the slaves of the needle. Their blinds were drawn down to shut out the sorry sight which the poet showed them in the street, and the silken pillow soon dulled the sound to their delicate ears. It is not at all comfortable to be told how much human life goes to the making of the robes you wear, or how many roses are taken from fair childish cheeks to give a moment's sweetness and a glow of colour to a costly faded life! So they turned away and forgot it as quickly as possible. A recent event has proved to us how necessary it is that the vision of the 'Lady's Dream' should be shown again and again, with its appalling sights that will be seen though the eyes are shut. The poet tells us how the lady lay in her soft warm bed, a very nest of luxury; but she moaned in her broken sleep, and tossed her restless arms. So great was her terror that she started up, and seemed to see some dreadful phantom in the dark, and the curtains shook with her tremblings:—

'And the light that fell on the bordered quilt  
Kept a tremulous gleam;  
And her voice was hollow, and shook as she cried—  
"Oh me! that awful dream!"

That weary, weary walk  
In the churchyard's dismal ground!  
And those horrible things with shady wings,  
That came and flitted round,—  
Death, death, and nothing but death,  
In every sight and sound!

And oh! those maidens young,  
Who wrought in that dreary room,  
With figures drooping and spectres thin,  
And cheeks without a bloom;  
And the voice that cried, "For the pomp of pride,  
We haste to an early tomb!"

And then they pointed. I never saw  
A ground so full of graves!  
And still the coffins came  
With their sorrowful trains and slow;  
Coffin after coffin still,  
In sad and sickening show!

But for the vision the lady had never dreamed of this world's walking spectres and the moving shadows, so to speak, of Fashion's fleeting brightness—of the hearts that break daily, the tears that fall hourly, the naked she might have clothed, the hungry she might

might have fed, the darkly-bewildered on whose way she might have shed some little guiding light. Now all was revealed :—

‘The sorrow I might have soothed,  
And the unregarded tears;  
For many a thronging shape was there,  
From long-forgotten years.  
Each pleading look, that long ago  
I scanned with a heedless eye,  
Each face was gazing as plainly there,  
As when I passed it by :  
Woe ! woe for me if the past should be  
Thus present when I die !  
Alas ! I have walked thro’ life  
Too heedless where I trod ;  
Nay, helping to trample my fellow worm,  
And fill the burial sod.  
Oh ! the wounds I might have healed !  
The human sorrow and smart !  
And yet it never was in my soul  
To play so ill a part :  
But evil is wrought by want of Thought,  
As well as want of Heart.’

When a man like this has lived his life and done his work, and Death has put his ‘Finis’ to the book, one great question is, ‘What has he laid up for himself out of this life to bear interest in another?’ The question on our side is, ‘What has he done for the world ; what is the value of his life and writings to us?’ Hood’s life was a long disease, for which death alone possessed the secret of healing ; a hand to hand, foot to foot, and face to face struggle day by day with adverse circumstances for the means of living. Yet out of all the suffering he secreted a precious pearl of poetry which will be a ‘thing of beauty ;’ and, in spite of the poverty and pain, he shed on the world such a smile of fun and fancy as will be a merry memory ‘for ever.’

But it is Thomas Hood’s chief glory that he ‘remembered the forgotten.’ His greatest work is that which his poems will do for the Poor. The proudest place for his name is on the banner borne at the head of their great army as it marches on to many a victory over ignorance, crime, and wrong. The lines written by Æschylus for his own epitaph show us that he was prouder of having fought at Marathon and left his mark upon the Mede than of all the works he had written. Heine the German Poet-Wit tells his countrymen he does not know whether he has won the laurel, nor does he care what they say of him as a poet ;  
but

but they may lay a sword upon his coffin because he was a brave soldier in the war for the freedom of mankind. In like manner, when we may have expatiated on the wit of Hood, or shown his fancy at the daintiest, the highest praise we can award is symbolled on his own tomb-stone, 'He sang the Song of the Shirt:' he gave one fitting voice to the dark, dumb world of poverty. Whilst others might be discussing the 'Condition-of-England' question, and some were for reforming humanity by new societary systems, and many sat with folded arms, saying, 'There is nothing new and there is nothing true, and it does not matter; come, let us worship Nirwana!' the poet went straight to the heart of the matter, which was the common human heart that underlies all difference of condition, all heavings of the body politic, all shapes of government. We do not say that he was faultless, or that he always succeeded in holding the balance even between the different classes of men. Indeed, his very last aspiration was to correct an error which some of his writings might seem to encourage. He says in the letter to Sir Robert Peel above alluded to,—the last letter that he ever wrote,—'My physical debility finds no tonic virtue in a steel pen, otherwise I would have written one more paper—a forewarning one—against an evil, or the danger of it, arising from a literary movement in which I have had some share, a one-sided humanity, opposite to that catholic Shaksperian sympathy, which felt with king as well as peasant, and duly estimated the mortal temptations of both stations. Certain classes at the poles of society are already too far asunder; it should be the duty of all writers to draw them nearer by kindly attraction, not to aggravate the existing repulsion, and place a wider moral gulf between rich and poor, with hate on the one side and fear on the other. But I am too weak for this task, the last I had set myself; it is death that stops my pen, you see, and not the pension.'

Finally, Hood was not one of those lofty and commanding minds that rise but once an age, on the mountain ranges of which light first smiles and last lingers. He does not keep his admirers standing at gaze in distant reverence and awe! He is no cold, polished, statuesque idol of the intellect, but one of the darlings of the English heart. You never think of Hood as dead and turned to marble. Statue or bust could never represent him to the imagination. It is always a real human being, a live workfellow or playfellow that meets you with the quaintest, kindest smile, takes you by the hand, looks into your face, and straightway your heart is touched to open and let him in. In life he complained of his *cold* hand; it used to be chilly as though he was so near an acquaintance of Death that they shook hands daily.

daily. You cannot feel the cold hand now; *that* was put off with the frail mortality. The hand he lays in yours is warm with life. He draws you home to him. You must see Hood in his home to know him: see how he touches with something of beauty the homeliest domestic relationships; see how he will transmute the leadenest cares into the gold of wit or poetry; keep a continual ripple of mirth and sparkle of sunny light playing over the smiling surface that hides the quiet dark deeps where the tragic life is lived unseen; from the saddest, dreariest night overhead bring out fairy worlds of exquisite fancy touched with rosiest light. And whatsoever place his name may win in the Temple of Fame, it is destined to be a household word with all who speak the English language. Though not one of the highest and most majestic amongst Immortals, he will always be among those who are near and dear to the English heart for the sake of his noble pleading of the cause of the Poor, and few names will call forth so tender a familiarity of affection as that of rare 'Tom Hood.'

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ART. III.—*The Geological Evidences of the Antiquity of Man, with Remarks on Theories of the Origin of Species by Variation.* By Sir Charles Lyell, F.R.S. 2nd Ed., pp. 528. 1863.

GEOLOGY no longer deserves the reproach uttered by the first and greatest of palæontologists, that its votaries neglected the study of the later periods of the history of the earth, and sought no help from a knowledge of its actual state toward explaining its former conditions. During the half-century which has elapsed since Cuvier declared himself to be an 'antiquary of a new order,' his successors have arrived at the clear conception of the real unity of the whole system of terrestrial events, depending on the general forces of heat and motion, which may be regarded as almost constant in their effects, and the special operations on the land, in the sea, and in the air, which are not the same for successive instants of time, or separated points on the surface of the planet. In the mind of the geologists of the present day, the monuments of the past and the phenomena now passing before us concur to form one united basis of a just history of natural processes on the earth.

The principle, so long contested, so hard to master, the principle that the causes now manifested in action are the same which have been employed from the beginning, has at length acquired  
universal



universal acceptance. Geology is fairly registered and takes high rank among the inductive sciences; contributing to all facts of great importance in their history, and gathering from all substantial aid toward the sound interpretation of its many discoveries. To astronomy it furnishes sensible proofs of the vast antiquity and successive conditions of this globe; and receives in return the precious results of the planetary theory which include these conditions. From mechanical science it borrows speculative investigations as to the condition of the interior of the earth, and the fracture of its crust; and repays the obligation by positive truths regarding the elevation of mountains, and the excavation of valleys, the varying depths of the sea, the direction of ancient currents, and the courses of ancient rivers. Zoology and botany no longer stand aloof and gaze in despair at the wondrous forms of plants and animals of earlier ages of the world; but after strict research admit the Saurian monsters of the oolite, and the gigantic plants of the coal, to vacant places in the great series of life which nothing now living could fill. Every branch of science has been disturbed by the progress of geological discovery, and perplexed by the new questions to which it has given rise.

The answers to these questions have brought to view a new difficulty which affects the whole course of geological interpretation, and every determination in which time is one of the elements. It is agreed on all hands that the phenomena of ancient nature can only be interpreted by the aid of the physical laws which now prevail on the land, in the waters, and in the air. The effects wrought in ancient nature are rightly referred to the forces which produce similar results before our eyes. The measure of these effects in a given interval of time varies from place to place, and from time to time, in conformity with the conditions under which the cause operates. If this measure be hard to fix in this present period, how is it to be ascertained for ancient periods?

Sir C. Lyell has many followers who hold, perhaps more strictly than he requires, the opinion that the physical condition of the globe is, on the whole, unaffected by time, and that the changes in early geological periods must be measured by the same *rate* as those now in progress. Others maintain that our actual system of slow and almost insensible physical change must not be applied to earlier ages when some of the causes acted with higher energy, and produced far greater effects in a given time than now, because they operated under conditions of the earth quite different from what we now perceive.

When geologists of these opposite opinions look at the same  
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great phenomena, such as the uplifted Alps, or the fractured mountains in the north of England, they are equally impressed by the magnitude of the effect; but the one sees in it the unequivocal evidence of a great internal power capable of displacing by an uninterrupted short effort large tracts of country and vast masses of rock; the other speaks of small measures of force operating continually, or at short intervals, through an immensity of time.

In the cases now quoted we give the preference to the opinion which assigns to the enormous fractures and violent wrenches in the mountains a force of great magnitude and short period. In other cases, especially where subsidence is indicated, as in the coalfields of Wales, the time appears to have been very long, the movement secular and slow. From a study of these and innumerable other cases, the right conclusion seems to be that the rate of progress of geological events in every age can be discovered only by a study of the particular effects; if these be of a critical and determinate character, the period of time consumed in producing them may be a subject for deliberate estimate; if not, it can only be a matter for conjecture without limit. The reader of 'Evidences of the Antiquity of Man' should keep this in mind.

Two centuries separate us from the days of Agostino Scilla, who vainly claimed for the fishes and shells buried in Italian rocks the recognition of their former residence in the sea. In that short interval of years every region of the earth has been searched for these remains of ancient life; ten thousand species of fossils, mostly of marine origin, are known to occur in the rocks of the British Islands alone; more than twice that number enter the general catalogue. It is no longer denied that they are the remains of creatures once endowed with life, and subject to growth, decay, and death; they are acknowledged for the most part to belong to earlier systems of life,—several such systems, indeed,—which began, endured, and passed away before the birth of man. Except in the merely superficial deposits, in peat or gravel, in the sediments of rivers, or the caverns of rocks, the remains of men have never been found. Nor in general have the remains of the quadrupeds most useful to man been recognised, except in similar situations. So that on a first view of the subject, there appears in the very latest step of the geological scale of time only a mere trace for the period of man and his contemporaries, while earlier races of living things, which filled the waters and covered the land, vindicate for themselves an immensity of unchronicled ages. In the contemplation of these unmeasured periods, and the

the great vicissitudes of the life and physical condition of the globe by which they were marked, geologists have always found the pleasure and felt the preference naturally due to the rich fields of their own discoveries. No treatment seemed too bold for problems which embraced the beginning and progress, the extinction and renewal of life, the fusion and solidification of mountains, the uplifting of continents, the alternations of polar and tropical climates.

Much more limited and far less persevering was the attention given to the later pages of the chronicle of natural events, in which no great latitude of speculation seemed possible; which, indeed, were at one time contemptuously treated as 'superficial deposits.' What could be expected of grand or striking among heaps of old sea gravel, or modern river sediments; the last feeble efforts of those once powerful agencies, whose Titanic struggle had continued '*donec quiescentibus causis, atque equilibratis,*'\* the settled order of things emerged which is suited to the abode of mankind? By the hands of Cuvier, in the gypsum quarries of Paris, the spell of this indolent prejudice was broken. There, in these neglected deposits, was found an array of extinct vertebrata, whose nearest analogues were to be sought on the other side of the earth, in a climate quite different from that of modern Europe. The noble volumes which enshrine the anatomical descriptions of these and a multitude of other '*Ossements Fossiles,*' contain in the admirable preliminary discourse a critical examination of some arguments touching the antiquity of man, and a decided opinion that the period which has elapsed since the last great and sudden 'revolution,' whereby the old continents were overwhelmed and the present lands laid dry, cannot be placed at much above 5000 or 6000 years ago.† The revolution here referred to was afterwards described by Dr. Buckland as a great flood, which first covered and then retired from the northern zones of the earth.‡ He regarded this flood as the 'universal deluge,' and declares that mankind had not established themselves in those countries which were occupied by the races of extinct quadrupeds, whose remains lie in caverns and in other 'antediluvian' deposits. These dicta of the two most eminent expounders of the fossil mammalogy were not uttered without the knowledge of several examples of the occurrence in the same caverns of the bones of men and extinct mammalia; nor without some careful consideration of these examples, especially in Germany and England. The result of the consideration, how-

\* Leibnitz, '*Protogæa.*'

† The first edition of the '*Ossements Fossiles*' was in 1812.

‡ '*Reliq. Diluv.,*' 1821.

ever, was a decided opinion that though found in the same locality, they did not belong to coexistent races, the remains of men being of later date. How completely the opinion was established that the remains of men or of human art, wherever discovered, were nowhere of the same date as the remains of extinct mammalia, may be seen in Meyer's '*Palæologica*' (1832), which notices many occurrences of human reliquiae; and Lyell's '*Elements of Geology*' (edition 1855), in which the 'recent' or 'human' period is marked off in a positive manner, and placed expressly above and distinct from ancient raised beaches, loose alluvial gravel, brickearth, &c., with shells of living species, and bones of quadrupeds both extinct and living, but no 'human remains.'\*

What can have occurred to disturb a conclusion so uniform, deliberate, and long-sustained? What new discoveries of greater clearness and completeness have thrown into the shade the many examples already explained and recorded? What new teachers have arisen to give better and more authoritative interpretations of facts so often examined? And lastly, what arguments can have convinced Sir C. Lyell of the necessity of revising the judgment which he had pronounced after personal examination of the evidence, and of admitting the coexistence of man with the mammoth in periods far older than those usually assigned to our race?

The answer is very simple. One cavern carefully examined within the last five years has furnished trustworthy data by which the less exact records of earlier explorations may be in some cases better understood, in others confirmed or corrected. This is the case of the cave which had been completely described, Brixham Cave

which was first explored by the Rev. J. McEnery in the year 1826 he presented to different institutions, and communicated to the Rev. J. G. P. de la Harpe and Buckland, to

the Rev. J. G. P. de la Harpe never completed, and the Rev. J. G. P. de la Harpe appeared to be neither a geologist nor a naturalist. Maps, sections, and other details were difficult to gather and were not preserved. It appears, however, that the cave of St. Vincent's Hole lies an

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\* F.G.S.' Edited by  
 1867, made public in

unequal deposit of loam or clay, containing broken and gnawed bones and teeth of extinct and living species of mammalia, and in the upper part of this clay artificially-chipped flints, mostly of a rude description. On this rests a layer of stalagmite, occasionally containing a streak of charcoal and burnt bones of living species of quadrupeds. Above the stalagmite, a stone-axe of a more finished shape, bone-pins, metallic-plates, and other remains of Celtic, British, Roman, and still later dates occur. Confining our attention to the lower deposit with bones and flints, it seems to have been ascertained by Mr. McEnery that the flint instruments which he repeatedly found in it had been really covered by the deposit of stalagmite. He regarded them, however, as of later date than the bones below them, and as belonging to a race of men who entered the cavern and disturbed the sandy and in places gravelly mud, which had been laid upon and mixed with the bones by a rush of upland water at some earlier epoch. The bones had been displaced by this current, but they had not been introduced by it. They were derived from animals which had lived and died in the cave, or had been dragged into it for food by the hyænas which, for some time at least, occupied it as a den. According to this view, some unknown interval of time separated the hyæna tenants of Kent's Hole from the earliest of the races of men who found refuge in it. And this conclusion was generally acquiesced in, the more readily as it had been already applied to a great number of other caves, in various parts of Europe, in which the phenomena were thought to be, in the main, similar. Doubts of different kinds, however, had been felt regarding these points, by subsequent explorers. Mr. Godwin Austen, in 1851, stated that the human remains were distributed equally with the bones through all parts of the clay, and had been washed in with them. On the contrary, Dr. Buckland is believed to have refused, or at least withheld, assent to the assertion that the flints were found under the stalagmite, and to have contended that they were only to be met with where that sparry floor had been broken into by men of a much later age.

Under these circumstances it happened that Dr. Falconer, on a visit to Torquay (1858), and while engaged in re-examining Kent's Hole, heard of a newly-discovered ossiferous cave at Brixham, on the opposite side of the bay. Singularly well-versed in discriminating fossil mammalia, and well accustomed in India and Europe to inquiries into their geological position, he seized the favourable occasion which seemed to itself of proposing a strict examination of this untouched deposit, in the hope of discovering the exact conditions under which

which remains of animals and the traces of human art really occurred. The proposal was accepted by the Geological Society; the Royal Society, aided by private contributions, supplied the necessary funds; the cave was thoroughly explored; the facts observed were duly recorded; the result was to reopen the whole question as to the contemporary existence of uncivilised men with the extinct hyæna, rhinoceros, and mammoth, and as to the interval of years which had elapsed since that distant epoch in the history of the earth.

By universal consent Sir C. Lyell was the person best qualified to conduct the inquiry and arrange the evidence, and this has been done in the volume before us. Not this alone; for, in order to show clearly 'Man's place in Nature,' the author has given a large space to the history of post-tertiary deposits of all ages, and has fully discussed collateral subjects, like those of the origin of species, and the different races and peculiarities of mankind. The work has thus acquired a permanent value as a review of the later geological phenomena by one whose attention has been incessantly devoted to them for more than thirty years. The investigations begin with what the author calls the 'Recent Period'—that in which the remains of organic life of all kinds, but specially of Mollusca and Mammalia, belong to species now living or historically known. The works of art found in Danish peat-bogs are first called in evidence to establish three successive periods when stone, bronze, and iron were used by men, and when different kinds of trees occupied Denmark.\*

'The deposits of peat in Denmark, varying in depth from ten to thirty feet, have been formed in hollows or depressions in the northern drift or boulder formation hereafter to be described. The lowest stratum, two to three feet thick, consists of swamp-peat composed chiefly of moss or sphagnum, above which lies another growth of peat, not made up exclusively of aquatic or swamp plants. Around the borders of the bogs, and at various depths in them, lie trunks of trees, especially of the Scotch fir (*Pinus sylvestris*), often three feet in diameter, which must have grown on the margin of the peat-mosses, and have frequently fallen into them. This tree is not now, nor has ever been in historical times, a native of the Danish Islands, and when introduced there has not thriven; yet it was evidently indigenous in the human period, for Steenstrup has taken out with his

\* This opinion of the relative antiquity of stone, brass, and iron, is of course much older than the age of the Danes:

'Arma antiqua manus, ungues deutesque fuerunt;  
Et lapides,  
Posterior ferri vis est, ærisque reperta:  
Et prior æris erat, quàm ferri, cognitus usus:  
Quo facilis magis est natura, et copia major.'

*Lucr.*, v. 1282.

own hands a flint instrument from below a buried trunk of one of these pines. It appears clear that the same Scotch fir was afterwards supplanted by the sessile variety of the common oak, of which many prostrate trunks occur in the peat at higher levels than the pines; and still higher the pedunculated variety of the same oak (*Quercus Robur*, L.) occurs with the alder, birch (*Betula verrucosa*, Ehrh.), and hazel. The oak has now in its turn been almost superseded in Denmark by the common beech. Other trees, such as the white birch (*Betula alba*), characterise the lower part of the bogs, and disappear from the higher; while others again, like the aspen (*Populus tremula*), occur at all levels, and still flourish in Denmark. All the land and fresh-water shells, and all the mammalia as well as the plants, whose remains occur buried in the Danish peat, are of recent species.

'It has been stated, that a stone implement was found under a buried Scotch fir at a great depth in the peat. By collecting and studying a vast variety of such implements, and other articles of human workmanship preserved in peat and in sand dunes on the coast, as also in certain shell-mounds of the aborigines presently to be described, the Danish and Swedish antiquaries and naturalists, MM. Nilsson, Steenstrup, Forchhammer, Thomsen, Worsåae, and others, have succeeded in establishing a chronological succession of periods, which they have called the ages of stone, of bronze, and of iron, named from the materials which have each in their turn served for the fabrication of implements.

'The age of stone in Denmark coincided with the period of the first vegetation, or that of the Scotch fir, and in part at least with the second vegetation, or that of the oak. But a considerable portion of the oak epoch coincided with "the age of bronze," for swords and shields of that metal, now in the Museum of Copenhagen, have been taken out of peat in which oaks abound. The age of iron corresponded more nearly with that of the beech-tree.'—pp. 8, 9, 10.

'The pottery found associated with weapons of bronze is of a more ornamental and tasteful style than any which belongs to the age of stone.'

Facts in several respects analogous to what is here stated of the trees occur in Yorkshire, near Beverley, and in several places in Lincolnshire and the Fens.

We have next a very interesting account of another class of memorials of men also discovered in Denmark:—

'In addition to the peat-mosses, another class of memorials found in Denmark has thrown light on the pre-historical age. At certain points along the shores of nearly all the Danish islands, mounds may be seen, consisting chiefly of thousands of cast-away shells of the oyster, cockle, and other mollusks of the same species as those which are now eaten by man. These shells are plentifully mixed up with the bones of various quadrupeds, birds, and fish, which served as the food of the rude hunters and fishers by whom the mounds were accumulated. I have seen similar large heaps of oysters, and other  
marine

marine shells, with interspersed stone implements, near the sea-shore, both in Massachusetts and in Georgia, U.S., left by the native North American Indians at points near to which they were in the habit of pitching their wigwams for centuries before the white man arrived.

'Such accumulations are called by the Danes, Kjökkenmødding, or "Kitchen-refuse-heaps." Scattered all through them are flint knives, hatchets, and other instruments of stone, horn, wood, and bone, with fragments of coarse pottery, mixed with charcoal and cinders, but never any implements of bronze, still less of iron. The stone hatchets and knives had been sharpened by rubbing, and in this respect are one degree less rude than those of an older date, associated in France with the bones of extinct mammalia, of which more in the sequel. The mounds vary in height from 3 to 10 feet, and in area are some of them 1000 feet long, and from 150 to 200 wide. They are rarely placed more than 10 feet above the level of the sea, and are confined to its immediate neighbourhood, or if not (and there are cases where they are several miles from the shore), the distance is ascribable to the entrance of a small stream, which has deposited sediment, or to the growth of a peaty swamp, by which the land has been made to advance on the Baltic, as it is still doing in many places, aided, according to M. Puggaard, by a very slow upheaval of the whole country at the rate of two or three inches in a century.'

Mounds corresponding in main features with the above have been seen by Lyell on the sea-shore of Massachusetts and Georgia, and by Lubbock very recently on the coast of Morayshire. In all cases their antiquity is considerable, but indeterminate. In Scandinavia, where they most abound, they are absent from the western coast—probably worn away with time. Another mark of high antiquity is found in the prevalent shells—as oysters (which no longer live in the brackish Baltic, except near its mouth), cockles, mussels, and periwinkles—all now reduced in size in the Baltic, but found of full size in the mounds, just as they occur in the ocean. Hence it seems fair to infer that 'in the days of the aboriginal hunters and fishers the ocean had freer access than now to the Baltic, communicating probably through the peninsula of Jutland.'

The quadrupeds found in the mounds all belong to species which now exist, or are recorded historically, in Europe. In the latter division we find the great wild bull, whose remains are frequent, but not the aurochs of Lithuania. Beavers long since destroyed in Denmark, and seals now very rare there, occur with red-deer and roe, but not reindeer. Lynx, fox, and wolf are found; but, except the dog, no domesticated animal. The domestic ox, horse, and sheep, which were wanting in the mounds, are also absent from the older parts of the Danish peat-bogs, but occur in those parts which contain bronze and iron implements. The wild  
bull



bull and larger mammalia served for food to the men of the period, who split the bones containing the marrow. Dogs left marks of their teeth on the hard and large bones, and probably consumed the smaller and softer, especially those of birds. The dogs were of a smaller race than later examples from the bronze period, and these yield in size to the dogs of the iron age. (p. 15.)

Among the bones of birds, the great auk, now fast disappearing in the extreme North, is recognised; and the capercailzie, which has been reintroduced into Scotland. The aborigines are thought to have resided all through the year, because of the occurrence in the mounds of the wild swan, now only a winter visitor, and of the horns of the roe deer in every stage of growth. They ventured to sea in canoes scooped out of a single tree, and brought back deep-sea fishes, such as herring, cod, and flounder. 'They were not cannibals, for no human bones are mingled with the spoils of the chase.' What manner of men they were, indeed, is inferred from skulls obtained from peat and tumuli, 'believed to be contemporaneous with the mounds.' Their crania are small and round, with prominent supra-orbital ridges, like those of the Laplanders; while the skulls of the later ages of bronze and iron are longer and larger.

Neither in the peat, mounds, nor tumuli of the early stone period are any traces of cereals discovered. They had no agriculture, but were not ignorant of fire, employing for fuel wood and sea-wrack:—

'What may be the antiquity of the earliest human remains preserved in the Danish peat cannot be estimated in centuries with any approach to accuracy. In the first place, in going back to the bronze age, we already find ourselves beyond the reach of history or even of tradition. In the time of the Romans the Danish Isles were covered, as now, with magnificent beech forests. Nowhere in the world does this tree flourish more luxuriantly than in Denmark, and eighteen centuries seem to have done little or nothing towards modifying the character of the forest vegetation. Yet in the antecedent bronze period there were no beech trees, or at most but a few stragglers, the country being then covered with oak. In the age of stone, the Scotch fir prevailed, and already there were human inhabitants in those old pine forests. How many generations of each species of tree flourished in succession before the pine was supplanted by the oak, and the oak by the beech, can be but vaguely conjectured, but the minimum of time required for the formation of so much peat must, according to the estimate of Steenstrup and other good authorities, have amounted to at least 4000 years; and there is nothing in the observed rate of the growth of peat opposed to the conclusion that the number of centuries may not have been four times as great, even though

though the signs of Man's existence have not yet been traced down to the lowest or amorphous stratum. As to the "shell-mounds," they correspond in date to the older portion of the peaty record, or to the earliest part of the age of stone as known in Denmark.'—pp. 16, 17.

Nor, we may add, on the other hand, is there anything in the observed rate of the growth of peat to prevent our adopting a period much shorter than 4000 years. For if a coin of Gordian was found, as De Luc assures us, thirty feet deep in peat, at Groningen; and a boat loaded with bricks was found in the lowest layer of the peat in the now famous valley of the Somme,\* we need not give mythical numbers to the age of peat. The history of peat is, however, too important an element in all attempts to compute the antiquity of man in Northern climates to be passed over in this way. The peat period of Europe undoubtedly extends backward in time beyond all the historical records of these countries, and even reaches the epoch of the great extinct mammalia; for in the British Isles it commonly includes, or immediately covers, skeletons of the great deer of Ireland, which in several caves and gravel beds was mixed with remains of elephant and rhinoceros; and near Sprottau, in Silesia, bones of *Elephas primigenius* are mentioned with cones of *Pinus sylvestris*.† It contains in many instances bones of animals which no longer inhabit the neighbouring regions, as *Bos primigenius*, and the red-deer, roebuck, reindeer, beaver, and wild boar; so that we may fairly regard it as filling the whole, or nearly the whole, interval of time which has elapsed since that epoch when the great mammoth and his contemporaries roamed in the forests of Northern Europe. On this account we cannot but regret the extreme brevity with which the subject is treated by the author, who lays no sufficient foundation for his estimate of 4000, or four times that number of years, either by a large series of facts selected by himself, or a critical analysis of the opinions of others.

If to remedy this great want we turn to former works of the same author, the effect is to satisfy us that the rate of the growth of peat, though very unequal, and variable with local climate and accidental circumstances, was, on the whole, not slow in former times. Thus within half a century after the overthrow of a forest by a storm in Ross-shire, the inhabitants were digging fuel from a peat-moss, to which the fall of the trees had given rise.

'In Hatfield Moss, in Yorkshire, which appears clearly to have been a forest eighteen hundred years ago, fir-trees have been found ninety

\* 'Princ. of Geology,' III. ch. xiii. p. 1.

† Meyer, 'Palæol.,' 540.

feet long, and sold for masts and keels of ships; oaks have also been discovered there above one hundred feet long. The dimensions of an oak from this moss are given in the "Philosophical Transactions," No. 275, which must have been larger than any tree now existing in the British dominions.

'In the same moss of Hatfield, as well as in that of Kincardine, in Scotland, and several others, Roman roads have been found covered to the depth of eight feet by peat. All the coins, axes, arms, and other utensils found in British and French mosses, are also Roman; so that a considerable portion of the peat in European peat-bogs is evidently not more ancient than the age of Julius Cæsar. Nor can any vestiges of the ancient forests described by that general, along the line of the great Roman Way in Britain, be discovered, except in the ruined trunks of trees in peat.

'De Luc ascertained that the very sites of the aboriginal forests of Hercinia, Semana, Ardennes, and several others, are now occupied by mosses and fens; and a great part of these changes have, with much probability, been attributed to the strict orders given by Severus, and other emperors, to destroy all the wood in the conquered provinces. Several of the British forests, however, which are now mosses, were cut at different periods, by order of the English parliament, because they harboured wolves or outlaws. Thus the Welsh woods were cut and burnt, in the reign of Edward I.; as were many of those in Ireland, by Henry II., to prevent the natives from harbouring in them, and harassing his troops.' \*

We have no hesitation in preferring the shorter period, which these and many other instances suggest—a period extending, perhaps, about twice as far back as the days of Julius Cæsar—to the longer and less definite stretch of ages which seem now to be suggested by Sir C. Lyell, rather, perhaps, in conformity with the opinions of others, than as the expression of his own deliberate judgment.

A third series of monuments of the recent period, from which more full information of the manners and customs of the early people may be gathered, is presented in the ancient dwellings built on piles in the shallow parts of many Swiss lakes, after the fashion which was noted by Herodotus among the Thracians of Præonia. There, in the middle of a mountain lake called Prasias, on platforms resting on piles, and connected with the shore by a narrow wooden causeway, the natives lived and fished in safety, and escaped the assaults of Xerxes.†

In the Swiss lakes similar constructions were frequent; and from the mud which surrounded them hundreds of implements resembling those of the Danish shell-mounds and peat-mosses have

\* 'Princ. of Geology,' 9th edition, ch. xlv., p. 721.

† Herod., v. 16.

been dredged. In the Lake of Zurich piles were found driven into the mud, and hammers, axes, celts, and other instruments, all of the stone period, except an armlet of thin brass wire and a small bronze hatchet. Fragments of rude pottery and charred wood were abundant; the burnt-clay lining of round huts is traced; fishing gear, as cord, hooks, stones for weights, Canoes made of a single tree were used, and stones were carried in them. As might be conjectured from such a list of discovered treasures, these lake dwellings are of unequal antiquity, some being of the stone period, and others of the bronze period. In the small lake of Moosseedorf, near Berne, implements of stone, horn, and bone were found, but none of metal. The stone was chiefly flint, brought, probably, from the south of France. Rude instruments of jade, supposed to have been brought from the East; and amber, of which the source is, with greater reason, attributed to the shores of the Baltic, were also found. In the Lake of Constance, hatchets of serpentine and greenstone, and arrow-heads of quartz, have been found; also woven cloth (flax?), carbonised wheat, grains of barley, cakes of bread, carbonised apples and small pears, stones of wild plum, seeds of raspberry and blackberry, beech-nuts and hazel-nuts. In this stone period the natives, besides cultivating cereals, had domesticated the dog, ox, sheep, and goat.

The settlements of the bronze period are marked by tools, ornaments, and pottery, closely resembling those of the same age in Denmark. The animal remains are numerous. Twenty-four mammals, including the great wild bull, and the aurochs, but not the reindeer; eighteen birds; three reptiles; nine fishes. They all, or nearly all, served for food; the bones of the large ruminants were split for marrow, as in the shell-mounds of Denmark. The hunters of the earlier period preferred the flesh of the stag, roe, and wild boar; the more settled people of later date were gratified by beef, mutton, and pig-meat. Goats seem to have been more plentiful in the earlier part of the age of stone, sheep in the later. Foxes prevailed in the stone period, but large dogs in the bronze period. Hares seem not to have been used for food—an error committed by our own ancestors, as well as by Oriental people in early times. Many curious facts have been discovered in relation to the domesticated animals and their successive varieties, and these may eventually clear up some of the uncertainty which clouds the history of our familiar four-footed companions; but of the men themselves only a few bones have been found. One skull dredged up at Meilen, in the Lake of Zurich, is intermediate between the long-headed and short-headed forms. From all that has been said, it seems probable  
that

that none of these dwellings, with their numerous associated relics, go further back than the shell-mounds of Denmark. In a few cases objects of more recent historic date have been found, as coins and medals of bronze and silver, struck by Greek artists at Massilia, in the pre-Roman state of Gaul.

So large and interesting a series of objects, found under different circumstances, encourages a hope of determining the ages of successive deposits with more precision than elsewhere:—

‘The attempts of the Swiss geologists and archæologists to estimate definitely in years the antiquity of the bronze and stone periods, although as yet confessedly imperfect, deserve notice, and appear to me to be full of promise. The most elaborate calculation is that made by M. Morlot, respecting the delta of the Tinière, a torrent which flows into the Lake of Geneva near Villeneuve. This small delta, to which the stream is annually making additions, is composed of gravel and sand. Its shape is that of a flattened cone, and its internal structure has of late been laid open to view in a railway cutting 1000 feet long and 32 feet deep. The regularity of its structure throughout implies that it has been formed very gradually, and by the uniform action of the same causes. Three layers of vegetable soil, each of which must at one time have formed the surface of the cone, have been cut through at different depths. The first of these was traced over a surface of 15,000 square feet, having an average thickness of five inches, and being about four feet below the present surface of the cone. This upper layer belonged to the Roman period, and contained Roman tiles and a coin. The second layer, followed over a surface of 25,000 square feet, was six inches thick, and lay at a depth of ten feet. In it were found fragments of unvarnished pottery and a pair of tweezers in bronze, indicating the bronze epoch. The third layer, followed for 35,000 square feet, was six or seven inches thick, and nineteen feet deep. In it were fragments of rude pottery, pieces of charcoal, broken bones, and a human skeleton having a small, round, and very thick skull. M. Morlot, assuming the Roman period to represent an antiquity of from sixteen to eighteen centuries, assigns to the bronze age a date of between 3000 and 4000 years, and to the oldest layer, that of the stone period, an age of from 5000 to 7000 years.

‘Another calculation has been made by M. Troyon to obtain the approximate date of the remains of an ancient settlement built on piles and preserved in a peat-bog at Chamblon, near Yverdun, on the Lake of Neufchatel. The site of the ancient Roman town of Eburodunum (Yverdun), once on the borders of the lake, and between which and the shore there now intervenes a zone of newly-gained dry land, 2500 feet in breadth, shows the rate at which the bed of the lake has been filled up with river sediment in fifteen centuries. Assuming the lake to have retreated at the same rate before the Roman period, the pile-works of Chamblon, which are of the bronze period, must be at the least 3300 years old.

‘For

'For the third calculation, communicated to me by M. Morlot, we are indebted to M. Victor Gilliéron, of Neuveville, on the Lake of Bienné. It relates to the age of a pile-dwelling, the mammalian bones of which are considered by M. Rüttimeyer to indicate the earliest portion of the stone period of Switzerland, and to correspond in age with the settlement of Moosseedorf.

'The piles in question occur at the Pont de Thièle, between the Lakes of Bienné and Neufchatel. The old convent of St. Jean, founded 750 years ago, and built originally on the margin of the Lake of Bienné, is now at a considerable distance from the shore, and affords a measure of the rate of the gain of land in seven centuries and a half. Assuming that a similar rate of the conversion of water into marshy land prevailed antecedently, we should require an addition of sixty centuries for the growth of the morass intervening between the convent and the aquatic dwelling of Pont de Thièle, in all 6750 years. M. Morlot, after examining the ground, thinks it highly probable that the shape of the bottom on which the morass rests is uniform; but this important point has not been tested by boring. The result, if confirmed, would agree exceedingly well with the chronological computation before mentioned of the age of the stone period of Tinière. As I have not myself visited Switzerland since these chronological speculations were first hazarded, I am unable to enter critically into a discussion of the objections which have been raised to the two first of them, or to decide on the merits of the explanations offered in reply.'

Though these computations may be liable to objection in regard to the rate of accumulation assumed, which for obvious reasons, in each case, may have been greater in the earlier than in the later ages, and so the earlier periods may require to be shortened, they obviously claim to be regarded as approximate estimates, and not as vague conjectures. It is to be regretted that in regard to the first, the *date* of the coin and the legionary mark of the tile are not given. In defect of such information the assumption of sixteen to eighteen centuries for their age is hazardous.

Lake-dwellings, called 'crannoge,' corresponding in some degree to those of Switzerland, occur in Ireland; and probably they fall within the same limits of time, but this can only be conjectured. They are not founded on piles. In one case, covered by fourteen feet of peat, the house was twelve feet square, and nine feet high, divided into two stories. It was founded on fine sand, below which the peat was at least fifteen feet thick. Lake-dwellings with stone implements are also recognised in Scotland, near Nairn.\*

In considering the general character of this whole discussion

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\* Lubbock, 'Nat. Hist. Rev.,' xi.

of the antiquity of human remains in connexion with the water-huts, kitchen-heaps, and peat-beds, we find the want of a scale of successive events common to them all, such as that which has guided geologists in all the earlier periods of the history of the earth. If we endeavour to supply this want by separate scales for each case, which may eventually be compared, these are found to be by their very nature vague and indecisive. We find the only common terms are the instruments of stone, bronze, and iron, which were employed through periods of unknown duration and of undefined limits. And to extricate ourselves from this difficulty we have for our guides only a few separate estimates of time, more or less carefully constructed, but not a single satisfactory determination, properly so called. We may say human remains occur in peat, some of which is at least 2000 years old, and other parts may be twice as old. We may say that on the coasts of the Baltic and in the valleys of Switzerland iron tools were preceded by instruments of bronze, and these by weapons of stone; but we experience surprise and disappointment when their relative antiquity is made to depend on another equally unmeasured succession of pine-forests, oaks, and beeches. Nor, if we accept the conclusions reached by so uncommon a process, do we feel any confidence in transferring them from Scandinavia, where iron was of early discovery, to countries farther south and farther west, which were nearer to Cyprus and its copper, and to Gallicia and Cornwall with their tin—these being the constituents of the most ancient brass which we call bronze. In very early times this valued alloy of the south was exchanged by navigators for the iron of the north.\* Perhaps in neither of these countries was there really a series of inventions beginning with stone and advancing to iron. No general law of progression has ever been traced in human society so as to determine periods of years by the shape, or substance, or uses of a tool; no law of the change of figure or magnitude in the crania of men, in conformity with advancing knowledge and milder manners, will give us the relative dates of brachycephalous and dolichocephalous, thick-skulled or thin-skulled, orthognathous or prognathous men.

If, indeed, we were to admit and confide in any such computations, how could we refuse to credit the deduction from another law, which has at least a more plausible foundation, the law of augmenting population? For by an easy computation it is possible to show that from a single pair the population of the globe, increasing by only  $\frac{1}{100}$  or even  $\frac{1}{200}$  every year, which has been taken as a fair average, would reach its actual amount of more than 1000 millions in less than 6000 years.

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\* Ές Τεμίσην μετὰ χαλκὸν ἔγω δ' αἶθωνα σίδηρον.—ΟΔ., Α', 184.

Other facts of interest are collected by Sir C. Lyell from the deposits of rivers, lakes, and the sea, containing human remains, and on them some additional computations are founded respecting the antiquity of man. We should have been glad to see more examples of this kind chosen from British and European rivers; for the conclusions, even if they were as strict as they really are vague, founded on the sediments of the Nile or the Mississippi, would bring but small weight to a cumulative argument which mainly applies to the races of men who dwelt in the north of Europe. We have, however, some good examples from Scotland, well selected and carefully arranged.

One of the cases is that of the sediments which the Nile has left in the long narrow valley of Egypt—sediments which Herodotus estimated to proceed at such a rate that in 10,000 or 20,000 years they would fill up a space equal to the Red Sea. Deep in these loamy deposits, experiments set on foot by Mr. Horner disclosed fragments of brick, pottery, land-shells, bones of ox, hog, dog, dromedary, and ass, but no bones of extinct mammalia. The excavations in the upper part were large, and therein entire jars, vases, pots, a burnt clay figure, and a copper knife were found; in the lower part they were contracted to a smaller bore, and only fragments could be collected. Ninety-five bore-holes were made, and most of them yielded reliquiae even at depths of 60 feet and 72 feet. The accretion in the plain of Egypt has been vaguely estimated at five or six inches in a hundred years, which would give 12,000 years for the distant date when some of the earliest bricks were burnt in the valley of the Nile; but for several reasons no dependence is placed on the estimate, and Sir C. Lyell allows that Egyptologists regard the experiments as inconclusive, and the period consumed in the deposition of a given thickness of Nilotic sediment as still undetermined.

Another instance of ancient monuments is brought from the basin of the Mississippi, and especially from the valley of the Ohio and its tributaries. Here numerous temples, defensive mounds, and burial heaps, often on a gigantic scale, which belonged to an unknown people, of the Mexican or Toltecan race, and contain polished weapons of stone, pottery, sculpture, and articles in silver and copper, occupy the fertile alluvial plains. Since some of these were constructed, the river has shifted its channel fully a mile, and over their ruins forests have succeeded to forests, trees of 800 years and more in age having been cut down within the memory of man.

The vast delta of the Mississippi, extending over 30,000 square miles, and reaching in some parts to a depth of several hundred feet, has yielded in its upper part—the ‘modern delta’ near New Orleans—



Orleans—amidst vegetable matter, a human skeleton and some charcoal at a depth of 16 feet. The cranium is said to belong to the Red Indian type, and the modest estimate of 50,000 years is quoted, but, we rejoice to say, without special approbation, by Sir C. Lyell. In another case, however, where a human bone was found associated with Mastodon and Megalonyx, in the alluvial sediment of the Mississippi, at Natchez, Sir C. Lyell now leans to the admission of the contemporaneity of the man and the quadrupeds, which in 1846 he refused, after personal examination. The discussion is too intricate to be condensed, and the conclusion, for 100,000 years of antiquity, too arbitrary to be trusted. It is not insisted on by our author. Nor does he require us to admit, with Agassiz, that 10,000 years have elapsed since the death of the man whose jaws, teeth, and foot-bones have been found in the newer part of the coral reef of Florida: on the contrary, he repeats the assurances contained in his great work, already referred to, of the comparatively modern date of the uplifting of the sea-bed with the gathered spoils of Roman days on the shores of the Bay of Baiæ—of the lacustrine sediments of Cashmere which covered pottery and recent shells, and even concealed a splendid Hindoo temple. Other proofs of great upward movement are presented to us in connexion with the volcanic region on the western shores of South America, within the human period, and of nearly equal effects on the coasts of Scotland, even since the Roman occupation of Britain. By such instances 'the geologist is now convinced that at no given æra of the past have the boundaries of land and sea, or the height of the one and the depth of the other, or the geographical range of the species inhabiting them, whether of animals or plants, become fixed and invariable' (p. 47).

These important conclusions are very well justified by a carefully digested account of many observations in the estuaries of the Clyde, Forth, and other parts of the coast of Scotland, which prove the occurrence of whales and shell-beds, canoes, boats, and an iron anchor, in marine sediments upheaved about 25 feet above the present sea level. Some of the canoes seem to have been excavated by blunt tools, with the aid of fire; others exhibit smooth cuts; one contained a polished celt of greenstone, and another a plug of cork, indicating a connexion by voyage with some southern country. Other and greater elevations took place in earlier time, but still, in the opinion of the author, within the human period. Thus in Ayrshire a rude ornament, made of Cannel coal, was found under gravel containing marine shells, 50 feet above the sea. If we adopt for the commencement of the 25 feet elevation an antiquity of seventeen centuries, the ornament

in question may be allowed to be of twice that age. According to the statement of our author, that the canoes exhibit evidences of the stone, bronze, and iron periods, we should thus find the stone period to correspond with that of the early Egyptian pyramids.

The coasts and interior of Sweden and Norway bear witness to greater elevations within the period of existing species of marine mollusca, elevations of 60, 200, 300, and even 600 feet. Only in the lower of these have remains of men been found—canoes earlier than the age of iron, an ancient hut, human bones, and fabricated articles. The land is still rising in Norway and Sweden; the rise is about 5 feet in a century at the North Cape, but grows less and less to the southward. Adopting  $2\frac{1}{2}$  feet for an average, a rise of 60 feet would be accomplished in 2400 years, and the extreme rise of 600 feet in 24,000 years—the one date appearing to fall within the bronze period, the other to approach the glacial age.

We may now accompany Sir C. Lyell in his reconsideration of another class of evidences for the antiquity of man, contained in deposits in which, while all the shells are of recent species, some of the accompanying mammalia are extinct, or belong to species not known to have lived within the times of history or tradition. These evidences are found in ossiferous caves and fissures, and in gravel-beds of unequal antiquity.

The bones of men and many marks of human art have been found in caverns, sometimes mixed with the bones of mammalia, —or, at least, lying in the same mud—sometimes separated from them by a layer of stalagmite. Disregarding the consideration of the last case—in which the posteriority and comparatively recent date of man, when compared with the extinct mammals, is obvious—Sir C. Lyell takes up the cases of Bize and Pondres, in the south of France, in which the human remains (bones and rude pottery) were mixed with those of several quadrupeds, of which some at least were extinct. When objects are thus mixed together, some circumstance common to all must have occurred, at some time, to produce this mixture,—often a current of water in the cave. But we cannot infer that men and animals lived at the same epoch, because at some time or other their bones have become mixed together. As our author well observes—

‘The caverns having been at one period the dens of wild beasts, and having served at other times as places of human habitation, worship, sepulture, concealment, or defence, one might easily conceive that the bones of man and those of animals, which were strewed over the floors of subterranean cavities, or which had fallen into tortuous  
rents

rents connecting them with the surface, might when swept away by floods be mingled in one promiscuous heap in the same ossiferous mud or breccia.'—p. 62.

To this was added an argument of no small weight against the contemporaneity of man and the cave animals: that while flint instruments, like those found in the caves of England and France, were of common occurrence in tumuli and under the 'dolmens,' with remains of oxen, deer, sheep, wild boars, horses, and dogs, no trace of mammoth, rhinoceros, hyæna, tiger, or other extinct quadrupeds, had ever been observed in those situations. The flint instruments seemed to authorise the belief that only one stage of civilization, one period of man's history, was in question, and that this was posterior to the age of the extinct mammalia.\*

The late Dr. Schmerling, of Liège, a most diligent explorer of the caverns in the Valley of the Meuse, found several examples of human and quadrupedal bones really mixed and rolled together. Usually, the bones were all separate: no complete skeleton; rarely the bones of a complete limb; no gnawed bones or coprolites. The inference was, that the bones had been rolled into the cave by water, with land-shells, fresh-water fishes, a snake, and some birds. Shaped bones and chipped flints lay in the same deposit, and in nearly all the caves, though other marks of human existence were entirely wanting in most of them. The bones of quadrupeds belonged partly to extinct, partly to existing species; and Schmerling believed them all to have lived in the same period as the men. Sir C. Lyell was not able to accept this conclusion in 1834, but he received it without doubt in 1860. Singular change! that he who could resist the keen logic of the living discoverer, fresh from his diggings, should, after thirty years of doubt, yield to the dry statements in the half-forgotten book which records the discoveries. Sir C. Lyell confirmed those statements by a re-examination of the Cavern of Engihoul, which had yielded bones of three human skeletons to Schmerling in 1831, and still afforded human jaws, mixed with bones of bears, pachyderms, and ruminants, in undisturbed earth beneath the stalagmite. We next meet an interesting discussion concerning two remarkable human skulls: one found in the Cavern of Neanderthal, near Düsseldorf, 60 feet above the stream; the other in the Cavern of Engis, near Liège; the latter associated with bones of extinct and living quadrupeds, the former (probably part of an entire skeleton) lying alone. Both skulls have something unusual in character: that from Neanderthal being very depressed, and bearing a very prominent

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\* Desnoyers, quoted by Lyell.

supraciliary ridge and the occipito-parietal slope at a very low angle,—a skull of low type, possibly that of an idiot, but quite removed from the pithecoïd type, which some naturalists of more than ordinary humility are content to accept as one of the earlier shapes through which ‘upward looking’ man passed in his long progress from some unknown ancestor in the possibly miocene period!

The Cave of Brixham, at which we now arrive, is composed of several branches, in different directions; the four openings which now appear at the surface having been formerly blocked up with breccia and earthy matter. The main opening is 78 feet above the valley and 95 feet above the sea. The cavern never exceeded 8 feet in width. The deposits in the cave were found to be: At the top, a layer of stalagmite, varying in thickness from 1 to 15 inches, which sometimes contained bones, as the horn of a reindeer and the entire humerus of a cavern-bear. Loam and bone-earth, reddish, with angular stones and some pebbles, from 2 to 13 feet in thickness, contained *elephas*, *rhinoceros*, *ursus*, *hyæna*, *felis*, reindeer, horse, ox, several rodents, &c. At the bottom, gravel with rounded pebbles in it, but no fossils.

No human bones, but many flint knives, were found, chiefly in the lowest part of the bone-earth; one of the most perfect 13 feet deep in the bone-earth. Some were found in the lowest gravel.

Perhaps the most remarkable fact observed was the occurrence of the entire left hind-leg of the cave-bear near the bottom of the bone-earth, and in close proximity to a very perfect flint tool. The bones were carefully uncovered by Dr. Falconer in the presence of Mr. Pengelly.

‘Here then,’ says the author, ‘we have the evidence of an entire limb not having been washed in a fossil state out of an older alluvium, and then swept afterwards into a cave, so as to be mingled with flint implements, but having been introduced when clothed with its flesh, or at least when it had the separate bones bound together by their natural ligaments, and in that state buried in mud!’

‘If they were not of contemporary date, it is clear from this case, and from the humerus of the *ursus spelæus*, before cited, as found in a floor of stalagmite, that the bear lived after the flint tools were manufactured, or in other words that man in this district preceded the cave-bear.’—p. 101.

Sir C. Lyell gives no estimate of the antiquity of the remains in caverns, nor does it appear easy to frame a satisfactory argument on that head. The caves are of every age since sea-water, or, more frequently, rain-water, began to operate in the chasms  
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of rocks. Their bony contents are of every age since animals entered them by choice, or were forced into them by violence, or drifted into them by currents of water. By comparing these bones with those found in gravel, silt, marl, and peat, we may prove their affinity with one or other of the successive groups of animal life which appeared in the country adjoining, and so infer their place in a scale of zoological sequence and geological time. Tried by this test, it seems probable, as Dr. Falconer concluded from a study of the Gower Caves, that the ossiferous caves and fissures are, for the most part, of post-glacial age. Perhaps, as Dr. Falconer's inquiries proceed, and the extinct species of elephant and rhinoceros are accurately placed in our lists of cavern animals, we may find the means of distributing them in groups of unequal antiquity.\*

Another mode of considering this subject is found in studying the actual in relation to the former physical condition of the country where the caves are situated. The openings of the caves are frequently on the sides of valleys, and inaccessible at present even to wild beasts; and yet they seem in some instances (as at Kirkdale) to have been the only entrances for the animals, though not for the mud and pebbles (when these occur). It seems, by this consideration, that since Kirkdale was occupied by hyænas the valley has been lowered about 30 feet, and at Rabenstein and other German caves a greater excavation may be admitted.\* At Brixham also the same arguments apply. Sir C. Lyell's views on this subject appear in his notices of the caverns near Liège:—

‘When we desire to reason or speculate on the probable antiquity of human bones found fossil in such situations as the caverns near Liège, there are two classes of evidence to which we may appeal for our guidance. First, considerations of the time required to allow of many species of carnivorous and herbivorous animals, which flourished in the cave period, becoming first scarce, and then so entirely extinct as we have seen that they had become before the era of the Danish peat and Swiss lake dwellings; secondly, the great number of centuries necessary for the conversion of the physical geography of the Liège district from its ancient to its present configuration; so many old underground channels, through which brooks and rivers flowed in the cave period, being now laid dry and choked up.

‘The great alterations which have taken place in the shape of the valley of the Meuse and some of its tributaries are often demonstrated by the abrupt manner in which the mouths of fossiliferous caverns open in the face of perpendicular precipices 200 feet or more in height

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\* See ‘*Reliq. Diluv.*’ for the geographical peculiarities.

above the present streams. There appears also, in many cases, to be such a correspondence in the openings of caverns on opposite sides of some of the valleys, both large and small, as to incline one to suspect that they originally belonged to a series of tunnels and galleries which were continuous before the present system of drainage came into play, or before the existing valleys were scooped out. Other signs of subsequent fluctuations are afforded by gravel containing elephant's bones at slight elevations above the Meuse and several of its tributaries. The loess also, in the suburbs and neighbourhood of Liège, occurring at various heights in patches lying at between 20 and 200 feet above the river, cannot be explained without supposing the filling up and re-excavation of the valleys at a period posterior to the washing in of the animal remains into most of the old caverns. It may be objected that, according to the present rate of change, no lapse of ages would suffice to bring about such revolutions in physical geography as we are here contemplating. This may be true. It is more than probable that the rate of change was once far more active than it is now. Some of the nearest volcanoes, namely, those of the Lower Eifel about sixty miles to the eastward, seem to have been in eruption in post-pliocene times, and may perhaps have been connected and coeval with repeated risings or sinkings of the land in the basin of the Meuse. It might be said, with equal truth, that according to the present course of events, no series of ages would suffice to reproduce such an assemblage of cones and craters as those of the Eifel (near Andernach for example); and yet some of them may be of sufficiently modern date to belong to the era when man was contemporary with the mammoth and rhinoceros in the basin of the Meuse.

But although we may be unable to estimate the minimum of time required for the changes in physical geography above alluded to, we cannot fail to perceive that the duration of the period must have been very protracted, and that other ages of comparative inaction may have followed, separating the post-pliocene from the historical periods, and constituting an interval no less indefinite in its duration.'

Encouraged by the discovery at Brixham, which seemed to complete and give consistency to the mass of evidence previously collected from ossiferous caverns in relation to the co-existence of man with the companions of the mammoth, Mr. Prestwich proceeded to re-examine the alluvial gravels and peat-beds in the valley of the Somme, near Abbeville and Amiens, which had formerly yielded several fossil bones to Cuvier, and, at a later time, abundance of chipped flints to M. de Perthes. The result has been to establish a series of facts, which seem to prove more distinctly than before the contemporaneous deposition of flint instruments, and bones of extinct mammalia, and support the inference already suggested on other grounds of the co-existence of man with these animals. Fresh discoveries have been made,

made, both in England and France, of flint tools and cut bones, in situations which indicate equal, or even greater, antiquity than the oldest gravels of the Somme.\*

The works of man's hands are, indeed, no longer the only evidence offered of his former familiarity with hyænas and mammoths; a human jaw and tooth are now brought as witnesses, not, indeed, without suspicion of their testimony, or a scrutiny of their individual adventures. A Congress even of French and English Plenipotentiaries have been sitting on the question, and a new treaty of Amiens is the result; a treaty, however, which, like that agreed to 'sixty years ago,' leaves ample space for further discussions.† For ourselves, we reject the jaw and the tooth.

The valley of the Somme is occupied from above Amiens to below Abbeville by peat 20 to 30 feet thick, resting on a thin clay, which covers sand and gravel. Under all is the white chalk with flints. The hills which border the valley rise very gently to 100, 200, and 300 feet above it. On their tops here and there are a few patches of tertiary strata of sand and clay, with fossils, and more extensive layers of loam, with angular flints, but no fossils. On the slopes towards the valley, at different heights, are deposits of gravel covered by loam. In these sloping ‡ and somewhat irregular deposits bones of elephant and rhinoceros, land and fresh-water shells of existing species, and flint implements have been found. Shells like those now to be collected from the neighbouring streams and hedges, and bones of existing species of quadrupeds, have been obtained from the peat, with flint tools of a more finished aspect, and a few fragments of human skeletons. In this peat the stone memorials of Celtic people lie below, the Gallo-Roman reliquæ occur above. Oaks, alders, and walnuts appear sometimes rooted in it, but no succession of forests of different trees has been ascertained.

From the depth to which the peat occupies the valley, the lower parts being below the level of the sea, it seems as if we must allow that a depression has occurred in the region. In the sands quite low on the sides of the valley near Abbeville, but above the tide-level, marine shells occur, and this seems to indicate elevation of the same region. These inferences, if just, may be reconciled, as in other cases, by supposing a moderate elevation of the land to have been followed by a depression of small

\* Desnoyers, communication to the Acad. des Sciences.

† These discussions, which have been opened since the issue of Sir C. Lyell's book, may be studied in the '*Comptes Rendus*,' '*Athenæum*,' '*Geologist*,' and '*Nat. Hist. Review*.'

‡ In the diagram of Sir C. Lyell these deposits are represented too much like the level terraces which occur in many English valleys, and are classed as high and low level gravels.

amount. Some drift peat has, however, been accumulated, it is probable, below the sea-level; and some marine shell-beds which are above that level only require the admission of tides flowing under different physical conditions. Sir C. Lyell's opinion is thus recorded:—

‘ Before the canal was made at Abbeville, the tide was perceptible in the Somme for some distance above that city. It would only require, therefore, a slight subsidence to allow the salt water to reach Menchecourt, as it did in the post-pliocene period. As a stratum containing exclusively land and fresh-water shells usually underlies the fluvio-marine sands at Menchecourt, it seems that the river first prevailed there, after which the land subsided; and then there was an upheaval which raised the country to a greater height than that at which it now stands, after which there was a second sinking, indicated by the position of the peat, as already explained (p. 111). All these changes happened since man first inhabited this region.’

At Menchecourt, near Abbeville, the lower sands, gravels, and loams compose a series of three parts, all above the present highest level of tide. The lowest series contains many shells of land and fresh-water species, and some marine species;—bones of elephant and rhinoceros, and flint implements. This series, about 12 feet thick, is considered to have been formed in a period when the sea sometimes gained upon the river, whether at high tides or in dry seasons, the land being slightly lower than at present. The middle series, about 15 feet thick, contains land and fresh-water shells only; it is a kind of stratified mud, resulting probably from an inundation; it contains bones of mammalia. The upper series, 2 to 4 feet thick, follows the slope of the ground and covers the other irregularly, as might happen from a land flood. It contains angular bleached flints.

The mammalian remains are most plentiful towards the bottom, and belong to *Elephas primigenius*; *Cervus Somonensis*; *Rhinoceros tichorhinus*; *C. Tarandus priscus*; *Equus fossilis*; *Bos primigenius*; *Felis spelæa*; *Hyæna spelæa*. One entire skeleton of rhinoceros has been found. On some of these (*e. g.*, *Rhinoceros* and *Cervus Somonensis*) are marks supposed to be made by some rude flint tools, used as a saw (p. 126). The cave bear, which is found at Brixham, and is common in German caves, is not mentioned in the deposits of Abbeville.

The greater part of the flint instruments are supposed to have been brought by river-floods from some other situation; the variety of the sections of gravel and sand, their unequal thicknesses and other irregularities, are supposed to be explained by the shifting of the channels; the upper part of the mass being, under these conditions, necessarily more loamy and less stony, with



with fewer implements and bones, but more land and amphibious shells.

About 100 feet above the valley, on the right bank of the Somme, on a gently sloping surface, is the Moulin Quignon. Here the extensive but shallow pits exhibited the chalk floor, covered by gravel and sand. The gravel is mainly composed of chalk-flints, more or less, but not greatly worn; well-rounded tertiary flint pebbles, and fragments of tertiary sandstone. The sands mixed with this gravel are of different colours and irregular distribution, but do not deserve to be called 'couches.' Some slightly argillaceous bands occur, and over all is loam and flinty fragments. From the lower part of this series flint instruments have been extracted, but no shells either of the sea, land, or fresh waters. Remains of the mammoth have occurred.

'It has been a matter of discussion among geologists whether the higher or the lower sands and gravel of the Somme valley are the more ancient. As a general rule, when there are alluvial formations of different ages in the same valley, those which occupy a more elevated position above the river plain are the oldest. In Auvergne and Velay, in Central France, where the bones of fossil quadrupeds occur at all heights above the present rivers from ten to one thousand feet, we observe the terrestrial fauna to depart in character from that now living in proportion as we ascend to higher terraces and platforms. We pass from the lower alluvium, containing the mammoth, tichorhine rhinoceros, and reindeer, to various older groups of fossils, till, on a table-land a thousand feet high (near Le Puy, for example), the abrupt termination of which overlooks the present valley, we discover an old extinct river-bed covered by a current of ancient lava, showing where the lowest level was once situated. In that elevated alluvium the remains of a tertiary mastodon and other quadrupeds of like antiquity are embedded.

'If the Menchecourt beds had been first formed, and the valley, after being nearly as deep and wide as it is now, had subsided, the sea must have advanced inland, causing small delta-like accumulations at successive heights, wherever the main river and its tributaries met the sea. Such a movement, especially if it were intermittent, and interrupted occasionally by long pauses, would very well account for the accumulation of stratified debris which we encounter at certain points in the valley, especially around Abbeville and Amiens. But we are precluded from adopting this theory by the entire absence of marine shells, and the presence of fresh-water and land species, and mammalian bones, in considerable abundance, in the drift both of higher and lower levels above Abbeville. Had there been a total absence of all organic remains, we might have imagined the former presence of the sea, and the destruction of such remains might have been ascribed to carbonic acid or other decomposing causes; but the  
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post-pliocene and implement-bearing strata can be shown by their fossils to be of fluviatile origin.'—pp. 130, 131.

Farther up the Somme, at and about Amiens, we find again a little above the level part of the valley, especially at St. Roch, sands and gravels without marine shells, but containing *Elephas antiquus* and *Hippopotamus*, with a few flint tools. About 80 feet above the valley is the gravel-bed of St. Acheul, covered as usual by loam. Many stone coffins of the Gallo-Roman period have been dug out of the upper portion of this alluvial mass. The trenches made for burying them sometimes penetrate 8 or 9 feet from the surface, through the loam into a sandy bed beneath, from which a tooth of *Elephas primigenius* was taken, while Sir C. Lyell was at the pit: another was found in the gravelly beds below, 17 feet deep, very near to a flint hatchet, 18 feet deep. *Elephas antiquus* was also recognized by Dr. Falconer. Fresh-water shells lie in the sandy parts of these gravel-beds, which are full of false bedding, and very irregularly mixed with the flinty mass. Chalk sloping considerably towards the Somme is the basis of this gravelly deposit. In some of the pits at St. Acheul blocks of hard sandstone, mostly angular, and as much as 3 or 4 feet in diameter, lie in the gravel; they belonged to tertiary beds, resembling the 'Greywethers' of Wiltshire, and seem to require for their occurrence the operation of some other agent than the river, which is supposed to have brought the gravel. That agent is conjectured to have been ice: to its irregular pressure while stranded after flotation, or rising from congelation in the bed of the stream, the contortions of the gravel are attributed; and as this implies a severe climate, the rivers must have been frozen every winter, and the contemporary men, hunters and fishers, might have kept open fishing holes in the ice, and might throw into them the waste from their flint manufactures.

To hunters and fishers, then, belonged the singular implements of which hundreds have now been collected in the valley of the Somme. They reveal to us a struggle for life in a severe climate, amid many hardships and privations, maintained by Celtic or pre-Celtic tribes, who occupied a considerable part of ancient Gaul—

'Et genus humanum multo fuit illud in arvis  
Durius, . . . . .  
Et manuum mirâ freti virtute, pedumque,  
Consectabantur sylvestria socla ferarum  
Missilibus saxis, et magno pondere clavæ.'

All this and more was part of the creed of the Epicureans. Lucretius was, however, mistaken in what he implies as to the gigantic proportions of the savage type of man; from all that is known it may be concluded that the earliest European races were of small stature.

‘Let us, then, suppose that, at the time when flint hatchets were embedded in great numbers in the ancient gravel which now forms the terrace of St. Acheul, the main river and its tributaries were annually frozen over for several months in winter. In that case, the primitive people may, as Mr. Prestwich hints, have resembled in their mode of life those American Indians who now inhabit the country between Hudson’s Bay and the Polar Sea. The habits of those Indians have been well described by Hearne, who spent some years among them. As often as deer and other game become scarce on the land, they betake themselves to fishing in the rivers; and for this purpose, and also to obtain water for drinking, they are in the constant practice of cutting round holes in the ice, a foot or more in diameter, through which they throw baited hooks or nets. Often they pitch their tent on the ice, and then cut such holes through it, using ice-chisels of metal when they can get copper or iron, but when not, employing tools of flint or hornstone.

‘The great accumulation of gravel at St. Acheul has taken place in part of the valley where the tributary streams, the Noye and the Arve, now join the Somme. These tributaries, as well as the main river, must have been running at the height first of a hundred feet, and afterwards at various lower levels above the present valley-plain, in those earlier times when the flint tools of the antique type were buried in successive river beds. I have said at various levels, because there are, here and there, patches of drift at heights intermediate between the higher and lower gravel, and also some deposits, showing that the river once flowed at elevations above as well as below the level of the platform of St. Acheul. As yet, however, no patch of gravel skirting the valley at heights exceeding one hundred feet above the Somme has yielded flint tools or other signs of the former sojourn of man in this region.

‘Possibly, in the earlier geographical condition of this country, the confluence of tributaries with the Somme afforded inducements to a hunting and fishing tribe to settle there, and some of the same natural advantages may have caused the first inhabitants of Amiens and Abbeville to fix on the same sites for their dwellings. If the early hunting and fishing tribes frequented the same spots for hundreds or thousands of years in succession, the number of the stone implements lost in the bed of the river need not surprise us. Ice-chisels, flint hatchets, and spear-heads may have slipped accidentally through holes kept constantly open, and the recovery of a lost treasure once sunk in the bed of the ice-bound stream, inevitably swept away with gravel on the breaking up of the ice in the spring, would be hopeless. During a long winter, in a country affording abundance of flint, the manu-  
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facture of tools would be continually in progress; and, if so, thousands of chips and flakes would be purposely thrown into the ice-hole, besides a great number of implements having flaws, or rejected as too unskilfully made to be worth preserving.'

Additional examples of the discovery of flint implements are recorded in the valley of the Thames, which, full as it is of fluviatile deposits of post-glacial ages, offers in addition one of the best cases yet observed for a general conspectus of the later cænozoic periods. In the upper parts of this valley, long since, Kidd and Buckland distinguished between the high and low level gravels, and assigned to each its characteristic origin. In the lower parts, Trimmer, Prestwich, Austen, Morris, and others have gathered a great amount of information regarding ancient life, from the main valley and its branches, from river gravels, marine drifts, and lacustrine marls. Almost neglected, amidst this profusion of interesting facts, were statements of the discovery of flint instruments in several situations. At Black St. Mary's, near Gray's-Inn-Lane, on the outskirts of London in 1715, was found a spear-head of flint, with the skeleton of an elephant. In the alluvium of the Wey, near Guildford, a wedge-shaped flint tool was found in gravel and sand, which had yielded tusks and teeth of elephant. Under the cliff at Whitstable an oval flint was found, probably derived from a fresh-water deposit, which contained bones of bear and an elephant's tooth. Another at the foot of the cliff between Herne Bay and the Reculvers (the ancient Regulbium), afterwards five others, and again three more; they had probably fallen from fresh-water gravel at the top of the cliff.

In the gravelly valley of the Ouse at Biddenham near Bedford, with bones of elephant, rhinoceros, and hippopotamus, and fresh-water shells, flint instruments like those of St. Acheul were found, one of the oval, one of the spear-head shape. The gravel is about 30 ft. above the river, somewhat higher than that on which Bedford is built, while in the sides of the valley is boulder clay, well characterised by fragments of syenite, basalt, quartz, and red sandstone, all foreign to the valley of the Ouse. In the course of the Waveney at Hoxne near Diss, about the beginning of this century, flint implements, very closely resembling those of Amiens, were found in a deposit of clay and gravel with fresh-water shells, covered by other gravel, and resting on peaty clay, the boulder deposit, a lower sand and gravel, and chalk with flints. Part of the head of an elephant and teeth of this animal were dug up with the flints; and more recently the astragalus of elephant, and bones of horse and deer. In the peaty mass, below the flint-bearing gravel, fragments of  
oak,

oak, yew, and fir were recognised. Similar flints have been found in the valley of the Lark near Bury St. Edmund's in post-glacial gravel.

In all the preceding remarks it is assumed that the 'chipped flints' referred to, which were found in peat, gravel, and caverns, have received their shape from the hand of man. To refuse this postulate is practically to decline the whole argument regarding the contemporaneity of man with the mammoth and his companions. Among geologists and archæologists the shaping of the flints by the ingenuity of man, for conflict in war or occupation in peace, is now almost universally admitted. From time to time, however, those who are startled by the new doctrines regarding the antiquity of man, which in so great a degree hang upon a correct view of the origin of these 'instruments,' ask two not impertinent questions. How is it known that the shapes of these flints may not have been acquired by the blows struck by nature in the thousand eddies of a gravel-bearing flood? And if these numerous relics be the work of men's hands, and were employed as savages now use stone weapons or tools, how happens it that no bones or other traces of the men remain—none, at least, with the rudest and earliest of the flints? Sir C. Lyell has not neglected these points. He delineates flints shaped like spear-heads, others like rude hatchets, others which were fitted to be knives and arrow tips. These designations are applied to them on account of their resemblance to stone instruments now in use among the Australians, or formerly in use among other uncivilised people. The resemblance is close enough to justify the use of the terms, the principal and most obvious difference being, that the older examples from the valley of the Somme show no marks of grinding or polishing, the cutting edge being always in the state left after many careful fractures; while the modern weapons and ancient celts are often polished to a smooth cutting edge. Mr. Evans\* has published a series of drawings of the three sorts of shaped flints, which appear to him by their approximate uniformity of shape, the correctness of outline, and the effective sharpness of the edges and points to require the admission of definite intention, persevering effort, and dexterity of hand.

To test the sufficiency of this argument from resemblance, we have collected and compared a great number of specimens of flints as they occur in the first stage of natural fracture in chalk pits; and others from ploughed fields, glacial drift, gravel pits, and peat bogs. Hardly a single example has ever occurred to

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\* 'Archæologia,' vol. xxxviii.

us in the least like the long spear-head flints of St. Acheul; here and there we have met with a few specimens which may be thought to have a vague resemblance to the oval sorts from the Somme valley; and a few flakes which may be ranked among the arrow tips and knives of Kent's Hole and Brixham. These very few analogues have been chiefly obtained from ploughed fields, where flints have been for ages exposed to alternations of heat and cold, and to sharp blows of agricultural instruments. Some of the flakes which are detached by natural fracture of flints falling in chalk pits, are sufficiently like those found in some caverns, to suggest that these latter may have been sometimes selected from amidst a mass of natural fragments, though more frequently struck off in the manufacture of more valued tools. When such flakes occur abundantly in caverns far away from the chalky repositories of flint, they seem to furnish as sure proof of man's agency as the more elaborate spear-heads in gravel. Regarding these latter the argument most convincing to our minds is the great number of facets on the flints, which concur in producing a few definite patterns of form, as well fitted for the peaceful work of a wedge, scraper, or ice-chisel, as for the cruel purposes of savage warfare. In some examples more than fifty blows must have been well directed to produce the sharp edges and convex disks, without the irregular splitting or cross fracture which will be likely to spoil the work of an amateur born since the days of the manufacture of gun-flints in West Norfolk. The great abundance of these flints at the several localities named in the valley of the Somme makes it very necessary to consider how it happens that human bones are so rarely if at all met with in any of the same situations. In the same deposits there is no such want of the bones of mammalia; and the bones and teeth of men are not in the least degree more perishable than those of quadrupeds. In ancient amphitheatres and battle-fields, and in the caverns of Liège, the osseous remains of man are as well preserved as those of contemporaneous animals. We are thus driven to suppose in the case of the Somme valley that the bones of men were very rarely mixed with the gravel, rather than to appeal to such examples as that of the Lake of Haarlem, in whose drained bed no trace was found of the bodies of contending seamen who sunk beneath its waters less than three centuries ago.

Sir C. Lyell has also found it requisite to defend the authenticity of the occurrence of the flint implements in the undisturbed gravels of the Somme valley. It appears that the demand for these objects has encouraged an illicit supply of modern manufacture; just as a few years ago an astute  
Yorkshire

Yorkshire farmer turned to good account the flints on his farm, by furnishing 'ancient British' arrow-heads to modern British archaeologists. It is in evidence that several characteristic specimens have been dug out by the hands of English and French geologists from the undisturbed gravel; so that there is no room for doubt as to the fact of their occurrence in the situations stated. But for specimens not so authenticated the marks of genuineness are not very clear or sure.

No estimate is given by the author of the antiquity of these gravels of the Somme, unless we accept as such the expression that they are of far higher antiquity than the peat in the same valley. In speaking of the Natchez deposit with its 'fossil' man, however (p. 204), we are told in a most ingenious manner that 'if the author was right in calculating that the present delta of the Mississippi has required, as a minimum of time, more than one hundred thousand years for its growth, it would follow, if the claims of the Natchez man to have co-existed with the Mastodon are admitted, that North America was peopled more than a thousand centuries ago by the human race' (p. 204). No wonder that Sir C. Lyell appears unwilling to declare his acceptance of a conclusion which, besides involving a very hazardous computation of the growth of a delta, requires that a statement regarding American geology may be held sufficient in England in 1863 which was rejected, after personal examination on the spot in America, in 1846. Evidently, however, he thinks highly of the antiquity of the deposit near Amiens, for he adds:—

'But even were that true, we could not presume, reasoning from ascertained geological data, that the Natchez bone was anterior in date to the antique flint hatchets of St. Acheul.

'When we ascend the Mississippi from Natchez to Vicksburg, and then enter the Ohio, we are accompanied everywhere by a continuous fringe of terraces of sand and gravel at a certain height above the alluvial plain, first of the great river, and then of its tributary. We also find that the older alluvium contains the remains of mastodon everywhere, and in some places, as at Evansville, those of the megalonyx. As in the valley of the Somme in Europe, those old post-pliocene gravels often occur at more than one level; and the ancient mounds of the Ohio, with their works of art, are newer than the old terraces of the mastodon period, just as the Gallo-Roman tombs of St. Acheul or the Celtic weapons of the Abbeville peat are more modern than the tools of the mammoth-bearing alluvium.

'In the first place, I may remind the reader that the vertical movement of two hundred and fifty feet, required to elevate the loess of Natchez to its present height, is exceeded by the upheaval which the marine stratum of Cagliari, containing pottery, has been ascertained by Count de la Marmora to have experienced, p. 177. Such changes

changes of level, therefore, have actually occurred in Europe in the human epoch, and may therefore have happened in America. In the second place, I may observe that, if, since the Natchez mastodon was embedded in clay, the delta of the Mississippi has been formed, so, since the mammoth and rhinoceros of Abbeville and Amiens were enveloped in fluviatile mud and gravel, together with flint tools, a great thickness of peat has accumulated in the Valley of the Somme; and antecedently to the first growth of peat, there had been time for the extinction of a great many mammalia, requiring, perhaps, as shown at p. 144, a lapse of ages many times greater than that demanded for the formation of thirty feet of peat, for since the earliest growth of the latter there has been no change in the species of mammalia in Europe.

‘Should future researches, therefore, confirm the opinion that the Natchez man coexisted with the mastodon, it would not enhance the value of the geological evidence in favour of man’s antiquity, but merely render the delta of the Mississippi available as a chronometer, by which the lapse of post-pliocene time could be measured somewhat less vaguely than by any means of measuring which have as yet been discovered or rendered available in Europe.’

We seem by this intricate process to be brought back at last to face the venerable memorials of our race ‘a thousand centuries’ old—

‘Salve, fatis mihi debita tellus,  
Hic domus, hæc patria est!’

The soil is sacred. It well becomes us children of the ‘recent period’ to manifest due reverence for the hoary seniors, contemporaries of the ancestors of the centaurs, who still speak to us by the long-enduring memorials of their simple industry—

‘Αἰδῶς δ’ αὖ, νέον ἄνδρα γεραίτερον ἐξερέσθαι.’

Dismissing the American case as involving too many consecutive suppositions, we find the problem of the age of the St. Acheul beds in the valley of the Somme to stand thus. These beds, it is admitted, were deposited under fluviatile action; they are supposed to be the oldest in which human remains have been found in Europe; they are older than the peat-beds, which also contain remains of men in the same neighbourhood. The age of some other deposits of peat in other countries has been estimated at 7000 years.

An estimate or conjecture of the greater antiquity of the gravels as compared with the peat may be formed on two grounds: First, by their elevation above the level of the valley which contains the peat, for this implies either an excavation of the valley below the level of the gravels since the date of their deposition by the waters of the Somme, or the elevation of what was once the river-bed to  
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the actual height of the plateau of St. Acheul. Either of these events, if we are to judge by what is now going on in the valley of the Somme, would require a period so long as to be practically incalculable. The river Somme could never excavate such a valley, nor is there any proof of upward or downward movement now in progress in its whole course. This method of estimation obviously yields no other result but the rejection of all estimates which are founded upon the actual measures of natural forces in their vicinity. If we take measures of these forces from other situations, assume other conditions of action, and deduce by such means definite terms of years, the result will still have no higher value than an arithmetical amusement or a chronological dream. Secondly, by the animal remains in them, for some of these belong to species which do not occur in the peat, and may be admitted to have died out in this region in the interval of time between the age of the gravel and the age of the peat. Judging by the rate at which quadrupeds have disappeared from given tracts of country in historical times, this extinction of the mammoth, rhinoceros, &c., must have required the operation of several, probably many, centuries. The reader who may have striven in vain to grasp the misty expansion of 90,000 years between the gravel of St. Acheul and the peat of Amiens, may be glad to feel himself in possession of a shorter and better assured period within which to intercalate the few facts of geological history, and the still fewer facts relating to mankind in Europe, which have yet come to light.

In considering the various races of animals with which, according to the evidence in this volume, European man may have been familiar in his more uncivilized days, we are struck by the mixture of forms like elephant, rhinoceros, hippopotamus, hyæna, and tiger—which recall to our minds the hotter regions of the earth—with the bear, wolf, fox, horse, urus, ox, deer, and others which seem to belong more to temperate and arctic climates. If, to settle the perplexity, we turn to the invertebrata which accompany them, these all (or with one or two exceptions) belong to species now living in the neighbourhood. Nor are such combinations of invertebrata as appear in the localities indicated known much farther to the north or much farther to the south. They seem, in fact, to agree with the trees and plants in claiming a climate and physical conditions not materially different from what now prevail in the same countries, or, if anything, more severe. This is probably the true conclusion. Though in the beginning of this century, and at subsequent times, it was not uncommon to speak of the extinc-

tion of the elephants and their companions by sharp and general refrigeration, it seems at present admitted that, as the hairy elephant and woolly rhinoceros were adapted to endure the northern cold, so might most of the other animals be able to bear it; while a few might migrate through many degrees of latitude, and be only summer visitants, like the tiger in the country of the Amoor and north of the Himalaya. But what of the hippopotamus, whose natural home seems to be in warm rivers and the neighbouring coasts, and who could neither be content to feed in frozen streams, nor be likely to travel over vast breadths of land, or through broad seas to explore less genial climes? Yet remains of the hippopotamus are not rare among the later post-glacial deposits of Lancashire and Yorkshire. The answer which most readily occurs is, that during this period great changes of physical geography occurred. As Germany was united to Britain, so Sicily may have been united to Africa, and thus shores have been formed, along which the huge swimming pachyderm may have had an easy summer voyage to the north, stopping at as many pleasant harbours as there were rivers on the ancient coast.

In conformity with such a view are the results of the inquiry by Falconer and Baron Anca in the caves which appear above the sea in cliffs on the northern coast of Sicily, and have sea-shells of living species on their floors. In the Cave of San Ciro, above this layer, are fragments of stones in marl, with land-shells and bones of two species of hippopotamus, belonging to several hundred individuals; elephant, bull, stag, boar, dog, and tiger accompany them. There is no river, lake, or brook in this vicinity to suit the habits of the river-horse. In the Cave of Mac-cagnone, on the opposite side of the same bay, flint knives, bone splinters, bits of charcoal, burnt clay, and other marks of human occupation, occur with bones of hyænas, horses, &c., in a breccia like that of San Ciro, and above a similar marine deposit. To these relics Baron Anca has added teeth of the living African elephant from another cave at Mendello. Elevation of the land is an obvious phenomenon in Sicily. If an event of this kind in the post-glacial time had affected the shallow sea-bed between Sicily and Africa by an upward movement of only 50 fathoms, Africa and Europe would have been connected by land which elephants might traverse, and lines of coast would have been established which might guide the migrations of the hippopotamus.

Such an extent of upward movement has, in fact, been familiar to geologists in a part of the Mediterranean not too distant to be quoted in illustration. An interesting case has been long known  
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in Sardinia, showing that at Cagliari an old sea-bed, with shells and pottery, has been raised 70 to 98 metres above the Mediterranean :—

‘ The geologist, therefore, may freely speculate on the time when herds of hippopotami issued from North African rivers, such as the Nile, and swam northwards in summer along the coasts of the Mediterranean, or even occasionally visited islands near the shore. Here and there they may have landed to graze or browse, tarrying awhile and afterwards continuing their course northwards. Others may have swum in a few summer days from rivers in the south of Spain or France to the Somme, Thames, or Severn, making timely retreat to the south before the snow and ice set in.’

One of the most instructive cases of the united occurrence of the remains of men and extinct quadrupeds is that of Aurignac, at the foot of the Pyrenees. In the nummulitic limestone adjoining this town, about 45 feet above the brook, is visible the entrance of a grotto or vaulted cave, in which the remains of seventeen human skeletons were found by accident in 1852. This space was closed by a large, heavy slab of rock, placed vertically against the opening. The whole was concealed by detritus collected on the slope. The bones belonged to a small race of men, but having been hastily reburied without due attention their cranial peculiarities are not known.

Eight years after the discovery, M. Lartet explored the ground on which the human skeletons were found within the vault, and what seemed to be corresponding deposits on the outside lying under detritus. He found, outside the cave, a layer of ashes and charcoal 7 inches thick, covering an area of 6 or 7 square yards, and extending to the entrance of the grotto, but no further. Among the cinders outside were found fragments of sandstone, reddened by heat, resting on a surface apparently levelled for a hearth. Among these ashes, and in some earthy layers above, were numerous instruments of flint and bone, arrow-tips of reindeer horn and a bodkin of the roebuck; flint knives, projectiles, slingstones, chips, and a ‘core,’ or frustum of flint; mixed with these were bones of extinct and living species of carnivora and herbivora, the latter most numerous; the marrowbones always split open, many of them burnt. The marks of gnawing by hyænas were frequent on the bones, and coprolites of these animals are mixed with the bones and overlying mud. Outside of the great slab of stone not one human bone occurred.

M. Lartet believes the cave to have been a place of successive sepultures; that funeral feasts accompanied the burials; that

some of the animals whose remains occur were eaten at these feasts; that fire was used; and that beasts of prey prowled about and fed on the relics. Within the cave no stalagmite was seen. The substratum was about 2 feet thick. It contained ten detached bones and teeth of men; the elements of a shell necklace; a bear's tusk, carved and perforated as an ornament; bones of rhinoceros, bear, and other extinct animals; an unused flint knife; teeth of the cave-lion, and two tusks of wild boar,—animals not found outside of the cave. No marks of injury, splitting, or gnawing, or burning, occurred on any of the bones within the cave, nor any charcoal or cinders. The bones of the human skeletons and of the *ursus spelæus* were found so placed as to indicate burial with the flesh on.

In reasoning on this case, which, more than any other yet known, seems to connect the ancient races of men in Europe with the age of the mammoth, Siberian rhinoceros, Irish elk, cave-bear, cave-lion, and cave-hyæna, it is important to remark that the stage of civilization of the people, judged of by the works of art, is not much different from that commonly exemplified in Gallic and British burials of pre-Roman date. The flint and bone instruments seem to be of more advanced forms than those of Amiens and Abbeville, though somewhat inferior to others obtained from caverns in which no extinct mammalia occurred. The Aurignac discovery adds in reality little to the evidence on which a great antiquity is claimed for mankind, but it is unique in the information it affords of primæval manners in the old country of the *Κελται*. It may be quoted for the comparatively late extinction of the woolly rhinoceros with as much justice as for the early date of the savages who ate his flesh.

‘The Aurignac cave adds no new species to the list of extinct quadrupeds, which we have elsewhere, and by independent evidence, ascertained to have once flourished contemporaneously with man. But if the fossil memorials have been correctly interpreted—if we have here before us at the northern base of the Pyrenees a sepulchral vault with skeletons of human beings, consigned by friends and relatives to their last resting-place—if we have also at the portal of the tomb the relics of funeral feasts, and within it indications of viands destined for the use of the departed on their way to a land of spirits; while among the funeral gifts are weapons wherewith in other fields to chase the gigantic deer, the cave-lion, the cave-bear, and woolly rhinoceros,—we have at last succeeded in tracing back the sacred rites of burial, and, more interesting still, a belief in a future state, to times long anterior to those of history and tradition. Rude and superstitious as may have been the savage of that remote era, he still deserved, by cherishing hopes of a hereafter, the epithet of  
“noble,”

"noble," which Dryden gave to what he seems to have pictured to himself as the primitive condition of our race:—

"as Nature first made Man,  
When wild in woods the noble savage ran."—pp. 192-3.

We need not add to this mass of evidence, more or less directly bearing on the antiquity of our race and the tribes of animals with which they disputed the rights of the forest and the stream, the somewhat unsatisfactory statements regarding the supposed fossil man of Denise, encrusted in volcanic tufa, and now preserved in the Museum of Puy en Velay. Its importance is now much reduced by the affluence of other discoveries, though, if genuine, it lends some confirmation both to the considerable antiquity of human remains and to their occurrence in volcanic deposits, which elsewhere yield bones of hyæna, hippopotamus, rhinoceros, and mammoth.

Here, then, ends the inquiry as to the date of the remains of men which have been found in deposits of the recent and post-pliocene periods; and here, in the hands of an inferior artist, the volume might have ended. But the works of Sir Charles Lyell are more carefully executed. In his compositions the principal figure is always relieved by associated groups, and brightened by tints which are reflected from surrounding objects. To these collateral subjects a large space is devoted, and we must follow very briefly a part at least of the interesting discussions in which the author has manifested his varied research and remarkable powers of combination. All the examples of human reliquæ are admitted to be of later date than the 'boulder clay,' which, in northern zones, is the most characteristic member of the deposits formerly called diluvial. They are now called 'glacial,' and are believed to have been accumulated under the influence of a degree of cold greater than now prevails in the northern zones. During that period glaciers occupied the mountains of Britain, and icebergs are believed to have floated in the waters which flowed several hundred feet deep over the lower lands.

In these deposits, wherever searched, no trace of man or his works has yet been found—none have been even imagined to occur in any earlier deposits. Yet in these beds and some pre-glacial beds, in fact (from the Crag upwards) we find a large proportion of the marine shells to be of existing species; in the fresh-water layers of different ages, some older than the boulder clay, some of more recent origin, we find plants, insects, and shells, mostly of existing species, and numerous mammalian remains, some of living, others of extinct species.

The bearing of this subject on the antiquity of man is chiefly  
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in the evidence it furnishes of a gradual removal of some animals and a gradual introduction of others, so that no material break affecting many species at once is discovered between the date of the Crag and the present day; from which it would appear that no sure conclusion can be established as to the date of the introduction of the human race from a consideration of the geological epochs of the races of animals which are now most useful to man. If remains of men are to be looked for in deposits which enclose bones of oxen, horses, and deer, hardly distinguishable from living races, this will carry us back beyond the glacial, or at least into the early part of the glacial period; for in the forest and lignitic beds which underlie the boulder drifts on the Norfolk coast, and are in close contact, if not real union, with the uppermost part of the Crag, the horse, ox, hog, deer, roebuck? and beaver are quoted with the fossil elephant, rhinoceros, and hippopotamus. Nor is it only with the mammoth we are here to deal: there appear to be three species of fossil elephants, according to the statement adopted by Lyell, in these preglacial forest beds, viz. :—

*Elephas primigenius*, Cuvier, or mammoth, contemporary with man in a later period.

*Elephas antiquus*, Falconer, contemporary with man in a later period.

*Elephas meridionalis*, Nesti, not known to have been contemporary with man, for it seems to be confined to the earlier deposits.

Yet Sir C. Lyell forbids us to despair of one day meeting with the remains of man in these deposits, on the ground of any ungeniality in the climate, or incongruity in the state of the animal creation, with the well-being of our species :—

‘For the present (he says) we must be content to wait and consider that we have made no investigations which entitle us to wonder that the bones or stone weapons of the era of the *Elephas meridionalis* have failed to come to light. If any such lie hid in those strata, and should hereafter be revealed to us, they would carry back the antiquity of man to a distance of time probably more than twice as great as that which separates our era from that of the most ancient of the tool-bearing gravels yet discovered in Picardy or elsewhere. But even then the reader will perceive that the age of man, though preglacial, would be so modern in the great geological calendar, that he would scarcely date so far back as the commencement of the post-pliocene period.’

By a large discussion of the peculiar phenomena of the glacial period—the depression and reelevation of vast tracts of land and sea—the extension and retreat of glaciers—the southward currents  
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of cold water with floating icebergs—the gravel beds at different levels—the author endeavours to estimate the duration of this glacial period. First, after the deposit of the uppermost or Norwich Crag, the land of the British Isles is conceived to have been much above its present level (600 feet), and connected with the continent so as to have received the elements of its preglacial fauna and flora, as they appear on the Norfolk coast. Next, to have been depressed north of the Thames and British Channel very much below its present level (1400 feet at least on Moel Tryfane), to have been submerged, in fact, and thus to have received the erratic blocks and other marks of floating icebergs. Again to have been raised to somewhat like the level first stated, and to have been repopled with plants, shells, insects, fishes, reptiles, birds, and mammals. Finally to have again subsided, but with several oscillations, to its present level. Omitting the first or preglacial period, the estimate is made for the glacial and post-glacial period. The unit of calculation is the rate of upward movement now observed in Scandinavia, which is boldly applied to the extreme oscillations of the old sea bed which happened in the glacial period on the slopes of Snowdonia: 224,000 years are thus found to be required for the depression and re-elevation of the northern parts of the globe! \* (p. 285.)

Whoever will freely accept 224,000 years as a fair valuation of glacial time, may be commended for simple faith in dogmatical geology, but not for critical skill in arithmetical or mechanical problems. Before adopting it, let him consider what are the 'assumptions' involved in the computation. First, it is assumed that the phenomena are to be explained by alternate upward and downward movements of a slow and continuous character in a given area; whereas shorter and stronger efforts, either there or elsewhere, are equally probable in a mechanical point of view, and have not been shown to be inapplicable to the geological phenomena before us. Secondly, a rate of upward movement, which is not very securely established by observations for a few years, and merely as an average in a limited region, is assumed to be the general rate of both upward and downward movement in the crust of the earth, without limitation as to height, or depth, or area, and without restraint as to duration. Moreover, the computation is essentially wrong in principle; for by the nature of the continuous movement supposed, the rate both upwards and downwards must be subject to all variations between a certain maximum and zero. To what part of the movement-curve, as it may be called, which

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\* If we add to Sir C. Lyell's total the preglacial period according to the same computation, it will increase the time from the crag to the present date to 272,000 years! But these results are quite imaginary.

represents

represents these variations, the Scandinavian rate of  $2\frac{1}{2}$  feet in a century applies, if it applies at all, is not known. If it correspond to a point near either vertex of the curve, it may be 10 times or 100 times too little for an average; and, as the case now stands, a number of years very much fewer than 224,000 may be accepted with an equal chance of approximation to the truth.

If we could call up a second geologist possessed of the same wide knowledge, employing the same persuasive style, and animated by the same unflinching ingenuity as Sir C. Lyell, it would, we think, be as easy for him to defend on plausible grounds a glacial period of 2000 as one of 200,000 years—as easy and as fruitless. The ‘coming’ geologist might appeal to the unequal heights above the sea, which are reached by glacial accumulations at different not far removed countries, in proof that variable local effort rather than uniform general intumescence or subsidence was indicated for the moving agency. He might quote the remarkable conformity of the preglacial and postglacial fauna to prove how short, in reality, must have been the interval of time which elapsed between the epochs of their existence; and he might describe in glowing terms the confused aspect, disturbed position, frequent and sudden changes of mineral character, and general paucity of life-remains in the glacial cliffs of Norfolk, as evidence of the comparatively short time required for these accumulations. But if we seriously undertake the history of the glacial period, we must begin by discarding all these dreamy computations of time, and measure the phenomena in a different spirit. In this case no guide so good as the author has shown himself to be in this volume, full as it is of well-selected observations, whose real value is very discernible through the glare of favoured hypotheses.

Sir C. Lyell presents with great care and completeness a large discussion of the peculiar phenomena of the glacial period and the immediately subsequent post-glacial deposits, and inquires whether the peopling of Europe by the human race and by the mammoth and other mammalia now extinct, was brought about during the concluding phase of the glacial epoch (p. 230). A great proportion of the statements collected in this considerable part of the work is sufficiently known to geologists to relieve us from the necessity of doing more than indicating the subjects treated of. The ancient ice-drifts from the once enormous area of glaciers in Scandinavia, the variations of climate in Greenland, the subsidence and re-elevation of Scotland, are already handled. We have also Mr. Jamieson’s new explanation of the parallel roads of Glen Roy, by the operation of water, dammed at different levels at different epochs by glaciers,  
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the latest and lowest of the parallels being, perhaps, as Sir C. Lyell conjectures, within the human period. The glacier system of Wales is supposed to have traces of three periods—the first of elevation, the next of subsidence to the extent of 2300 feet (shells are seen to 1400 feet), followed by re-elevation. In Ireland shells appear to 600 feet, and actual drift is traced to 1500 feet; the depression indeed is imagined to have reached 2500 feet; but neither here nor in Wales does the evidence appear satisfactory. The maps which are given in illustration of the supposed areas of land and sea in the glacial period are very useful.

Indications of a cold period, perhaps referable to the same glacial age, appear even in Sicily and Syria; and in this last country Dr. Hooker found the cedars of Lebanon growing exclusively on the moraine of an ancient glacier, 4000 feet below the summit of the mountain, which is no longer covered with perpetual snow (p. 323). The glaciation of Switzerland is also treated in a more complete manner than elsewhere; and the real or supposed effects of the ice movements in grinding and polishing the bordering and supporting rocks, and transporting large blocks across valleys, and excavating the valleys and even the lakes themselves, are clearly described. Four ice-periods are supposed to be recognised in the Alps, which seem to agree with the glacial periods of elevation and subsidence already traced in Britain—a remarkable coincidence if it can be relied on. These very coincidences, however, and the enormous extent of glaciation advocated in this volume at levels so much below the present snow line, and over spaces now enjoying mild climates, augment the difficulty of a just interpretation of the physical causes. For the particular meridian of the British Isles—now the warmest in the Northern hemisphere—deviation of the Gulf-stream is probably a sufficient physical cause of considerable cold;\* coupled with some other geographical conditions it might be accepted for a moderate augmentation of the cold of the Alps, and a corresponding extension of the glaciers about the sources of the Rhine and the Rhone. But if these effects were produced in Syria, the Alps, Ireland, and the latitudes of Boston and New York, if not at the same epoch, yet certainly during the same period, all merely local changes of the boundaries and levels of land and sea would be inadequate to explain the facts, and some more general condition affecting a large part of the Arctic and North temperate zones must be invoked. On the whole, we must regard the great glacial problem, in its geological aspect, as yet but incompletely solved.†

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\* Hopkins, in 'Geol. Soc. Journal,' vol. viii.

† See 'Quarterly Review,' July, 1863, art. 'Glaciers.'

The loamy deposit called loess, which is extensive in the basins of the Rhine, Danube, and some other large rivers draining the Alps, receives some explanation from the glaciation of the mountains. It seems to be moraine mud; that is, the finer part of the glacial detritus usually accumulated in moraines. It would seem that no such masses of loamy deposit could have been derived from the Alps, if the lakes which now receive the greater part of the sediment had been open to absorb it. It is conjectured that they were filled with ice, and that the loam moved over them by glaciers was distributed by rivers over large areas of country.

Near Maestricht, in a section of some extent lying in gravel, the loess is said to have yielded a human jaw, in a situation nineteen feet deep, and six feet from a tusk of an elephant. Many remains of elephants, deer, ox, and other mammalia were found, mostly in and near the gravel.

Our author takes notice of dislocations and foldings of cretaceous and drift strata in the Isle of Möen, a remarkable case of comparatively late, and yet very extensive, local disturbance of the earth's crust, seen in high and abrupt cliffs. This case of movements upward and downward of 400 feet, appears to justify a suspicion which it is difficult to avoid while inspecting the Cromer cliffs, that the singular foldings and squeezes of the drift strata there are more due to subsidence, depending on local failure of support, than to icebergs stranded and melting in contact with the unconsolidated drifts. These movements in Möen appear to belong to the older part of the drift period.

The glacial period is exemplified in North America on a grand scale as far south as the 42nd parallel of latitude, and a cold character of climate appears to have extended through a great part of the post-pliocene period. *Mastodon giganteus* abounds in North America, as *Elephas primigenius* does in Europe, especially in fresh-water deposits—old lakes and bogs—in hollows of the drift, corresponding to the peat and shell-marl deposits of Denmark, the Somme, and Ireland. Glaciers covered some particular mountains, and trains of erratic blocks are traced over very large spaces in Massachusetts, New York, and other countries. The phenomena connected with them are like those in Europe; if they were occasioned at the same times, the difficulty of accounting for them without some general hypothesis affecting the whole of the Arctic zone is obviously great.

A better approximation than we now possess to the physical causes of such extensive glaciation, and a measure of the length of the glacial period, would be very acceptable to naturalists, who recognise in the pre-glacial and post-glacial fauna and flora the

same

same fundamental forms—*Elephas meridionalis*, indeed, and a few other species of animals, have not been seen in the post-glacial deposits; perhaps they died out in the interval. But if we are to give to the glacial period more than two thousand centuries, how amazing under such an aspect appears the long duration of specific forms! How faint the trace of any systematic change of these forms with time and with circumstance! Plants, insects, shells—rodents, ruminants, carnivora—all remain the same; none have undergone change in that immensity of time, under all that long banishment, and through all that slow return. The longer the glacial period, the more remarkable is the failure of proof of indefinite variation of species, the more difficult the acceptance of those consequences of the 'struggle for existence' and 'natural selection' which are offered by Darwin and his followers. How does this apply to the case of man? Obviously, as Huxley and Lyell argue, it requires us to carry back his origin, by transmutation from 'something else' beyond glacial and pre-glacial, post-pliocene and pliocene ages, till the miocene comes with friendly veil, and shelters the mysterious germ of humanity.

In truth, this subject of the relation of man to the four-handed races, and his origin from those uneducated naturalists, or from something anterior to both, loses all hold on the mind in presence of the total want of evidence of any real change in man or inferior creatures with time. In testing such an hypothesis we need not be niggards of time. No conceivable duration will suffice, with such differentials as we possess, to transform any one thing into its nearest of kin; nor has any real progress been made on sound principles, in the effort to show that organic forms are the functional expression of time, however great, combined with circumstances however variable.

In the celebrated work which has been Sir C. Lyell's passport to well-earned fame, the plausible speculations of Lamarck regarding the origin and development of living beings, and the dependence of specific forms on time and circumstance, were examined and rejected. They are now reconsidered under the titles of Progression and Transmutation in the volume before us, and admitted—perhaps not without reluctance—at least in their general meaning. Geological progression, however, as understood by Sedgwick ('Antiq. of Man,' p. 394), is quite a distinct thing from physiological development as explained by any of the writers classed by Lyell as transmutationists. The advocates of the former take the facts as they appear, and recognise distinct stages in the scale of time at which in succession particular groups of life began, prevailed, and passed away. On the whole, they observe

observe higher and higher grades arise and acquire the mastery of the sea—cephalopods, fishes, reptiles, cretacea—and on the land marsupialia, pachydermata, and ruminantia prepare the landscape for man. But they do not, and by the nature of the case they cannot, regard this series of steps, leading in different directions to unequal heights, as represented by one smooth sheet of development of which each succeeding part is the function or natural result of those which have gone before. This distinction is not sufficiently kept in mind, yet it is of great importance; for it leads the physiologist to exaggerate the ‘imperfection of the geological record’ in which the gaps occur which are fatal to the continuity of his smoothly developed system, and it leads the geologist to overrate the value of minute differences of form, which are of some importance as marks of elapsed time, but not decisive of ‘specific’ difference. Palæontology, wisely and fully prosecuted, will correct both of these tendencies; it will, in the hands of Davidson, reduce the number of so-called species of Brachiopoda in a given stratum, as the mountain-limestone; it will determine, in due time, the ‘specific’ identity, or real difference, of the Terebratulæ of the carboniferous and the Permian periods; it will settle the family differences of the Ammonitidæ; and it will unravel the curious complexity of the Triassic fauna and flora. And thus we shall know, far better than now, what is really the amount of imperfection of the geological record, and how to supplement it by hypothesis. Till then, it appears premature to regard such discussions as those which fill the latter chapters of this volume on the ‘Antiquity of Man’ as more than contributions from one point of view, and tinted of one prevailing colour.

The new form given to the doctrine of ‘transmutation’ or indefinite variation of species by Mr. Darwin is examined under several aspects, for the most part favourable to it; and examples are produced of zoological and geological phenomena, to which the hypothesis of ‘natural selection’ and ‘descent with modification’ seems applicable. It is not, however, in this way that the truth will clearly and fully appear. Mr. Darwin has no expectation of establishing his doctrine by showing its applicability to particular cases. He has truly said that, with regard to several important generalisations, ‘any theory of descent’ will connect them by an intelligible chain of reasoning; \* nor does he decline to accept many subordinate modifications and improvements of his views, provided it be granted that species were not created immutable. Here, in fact, is the whole question. It has not

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\* ‘Athenæum,’ May 9, 1863.

been quite fairly presented, either by Mr. Darwin's followers or his opponents. It is not fully explored by Sir Charles Lyell, in the interesting chapters which he devotes to it, which, however, set some of its characteristics clearly before the eye.

Those who believe in definite forms have often been rash in ascribing this quality to everything which could be distinguished—thus allowing no diameter to their circle of form—whether a rubus or a rhynchonella. The necessary reunion in one group of those unjustly separated elements is regarded by some transmutationists as a proof that no true definition—no real limiting circle—exists. In the following passages the views of Sir C. Lyell are expressed so as to make it appear that he has not yet accepted this transmutation dogma :—

‘Examples are also given by Mr. Davidson of species which pass from the Devonian into the Carboniferous, and from that again into the Permian rocks. The vast longevity of such specific forms has not been generally recognised in consequence of the change of names, which they have undergone when derived from such distant formations, as when *Atrypa unguicularis* assumes, when derived from a carboniferous rock, the name of *Spirifera Uriei*, besides several other synonyms, and then, when it reaches the Permian period, takes the name of *Spirifera Clannyana*; all of which forms the author of the monograph, now under consideration, asserts to be one and the same.

‘No geologist will deny that the distance of time which separates some of the eras above alluded to, or the dates of the earliest and latest appearances of some of the fossils above mentioned, must be reckoned by millions of years. According to Mr. Darwin's views, it is only by having at our command the records of such enormous periods, that we can expect to be able to point out the gradations which unite very distinct specific forms. But the advocate of transmutation must not be disappointed if, when he has succeeded in obtaining some of the proofs which he was challenged to produce, they make no impression on the mind of his opponent. All that will be conceded is that specific variation in the Brachiopoda, at least, has a wider range than was formerly suspected. So long as several allied species were brought nearer and nearer to each other, considerable uneasiness might have been felt as to the reality of species in general, but when fifteen or more are once fairly merged in one group, constituting in the aggregate a single species, one and indivisible, and capable of being readily distinguished from every other group at present known, all misgivings are at an end. Implicit trust in the immutability of species is then restored, and the more insensible the shades from one extreme to the other, in a word, the more complete the evidence of transition, the more nugatory does the argument derived from it appear. It then simply resolves itself into one of those exceptional instances of what is called a protean form.’—p. 429.

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We must leave the author to work his own way through the controversies regarding the origin and varieties of language, which offer so much analogy to the questions concerning organic life, and the discussions respecting the peculiarities of the cerebrum of man, which have at least had this good effect—that the classifications of mammalia have been improved by the additional knowledge gained. Sir C. Lyell holds to the doctrine of mankind having sprung from a single pair (p. 385); to the original unity of language; and to the immensity of time required for its subdivisions and separate developments. And as language changes more rapidly than races—a fact of which, at least as regards historical times, there can be no question—the distinction of races seems to be older than the division of language. The study of language does not furnish data of much exactness in questions of time; but we may remark that ‘if none of the tongues now spoken in Europe were in existence ten centuries ago,’ we may be satisfied with less than ten times that period, in accounting for all the diversity of language.

Having on the whole fortified himself in the belief of the immense antiquity of our race, the author concludes his work with considerations regarding the grounds for referring man, in zoological classifications, to a distinct kingdom of nature. This can only be done by allowing to his moral and intellectual endowments their due weight; for by mere bodily organization he would be joined to some families of animals endowed with analogous structure. This seems to have been the opinion of the late Archbishop of Canterbury, who, in his famous work, now half a century old, entitled ‘Records of Creation,’ thus expresses a sound judgment, which our author quotes with approbation (p. 496):—

“There are writers,” he observes, “who have taken an extraordinary pleasure in levelling the broad distinction which separates man from the brute creation. Misled to a false conclusion by the infinite variety of Nature’s productions, they have described a chain of existence connecting the vegetable with the animal world, and the different orders of animals one with another, so as to rise by an almost imperceptible gradation from the tribe of Simiæ to the lowest of the human race, and from these upwards to the most refined. But if a comparison were to be drawn, it should be taken, not from the upright form, which is by no means confined to mankind, nor even from the vague term reason, which cannot always be accurately separated from instinct, but from that power of progressive and improvable reason, which is man’s peculiar and exclusive endowment.

“It has been sometimes alleged, and may be founded on fact, that there is less difference between the highest brute animal and the lowest savage than between the savage and the most improved man. But in order to warrant the protended analogy, it ought to be also  
true

true that this lowest savage is no more capable of improvement than the Chimpanzee or Orang-outang.

"Animals," he adds, "are born what they are intended to remain. Nature has bestowed upon them a certain rank, and limited the extent of their capacity by an impassable decree. Man she has empowered and obliged to become the artificer of his own rank in the scale of beings by the peculiar gift of improvable reason."—p. 496.

To this we will only add the obvious remark, that the bodily structure of man and terrestrial quadrupeds is much alike, because their lives are passed under much the same relations in regard to external nature. They breathe the same air, under the same pressure, hear by the same waves of sound, see by the same light, move by mechanical means which are measured against the same force of gravity, seek food from amidst the same esculents, and digest it with the aid of the same internal chemistry. The wonder is rather that so much special diversity is added to so much general conformity; that each species is so exactly limited and so definitely equipped for its way of life; man alone to walk erect, and look upward to the heaven which attracts his thoughts away from this earth, with its allurements and trials, its questions and doubts. Geology, once or twice in a century, receives unseasonable thanks and incurs inconsiderate censure for the supposed help or impediments which it offers to Theology. The praise and the blame are alike unjust. Christian faith needs no such help, and fears no such opposition. Founded on moral evidence and the nature of man, it looks with calmness on questions of the limits of species, and the antiquity of unknown races of savages. When these questions have received surer solutions than we at present possess or have reason to expect, it will be time enough for considering in what relation they stand to things of higher value. If we should never resolve them, it will be no occasion for wonder, for nature is full of unanswered questions; but if we never try to resolve them, it should be a cause for regret. It is not so much by successful interpretation of the wonders of nature, as by diligent exertion of the faculties which God has given in the study of the works which He has created, that man vindicates his glorious destiny of never-ending advancement, and separates himself from the beasts that perish.

In considering as a whole the remarkable volume before us, we observe that the method taken by Sir Charles Lyell to solve the problem of the antiquity of man in the west of Europe, is to prove two propositions:—1. That man was contemporary with several animals no longer seen in the same regions, and with some which are no longer to be found living on the earth; 2. That an interval of time enormous as compared with the reach

reach of human annals, though small as compared with the immeasurable ages of the history of the earth, separates our present epoch from that of the extinction of the mammoth, woolly rhinoceros, and cavern bear. The first of these propositions is of great importance in geology; the second may have higher interest of another kind. For the first we hold the evidence now brought together by Sir C. Lyell to be strong, though not conclusive, both from gravel-beds and from caverns. The remaining doubts in the case of gravel-beds arise from the fact that the bones of quadrupeds found in the gravel are in general so scattered as to suggest their derivation from an earlier repository. If that were so, the flint tools, which betray very little signs of local displacement, may be of later origin, though of contemporaneous deposition.

In the case of caverns where the bones and flints have been often and much displaced by water—in some cases brought in by water—there is room for a similar doubt. But every fresh example of the concurrence of human implements and quadrupedal bones strengthens the argument for the contemporaneity of man and the animals; and thus by degrees the proposition has been brought within the range of reasonable acceptance, at least provisionally, and for those countries where the observations have been made.

But with respect to the ‘immense antiquity’ of the oldest human remains in Europe, the case is different, the evidence insufficient. It is manifestly inadequate in the examples brought from the alluvial sediments of the Nile and the Mississippi, and it must also be pronounced by careful inquirers to be insufficient in the best examined instances in the caves, gravels, and peat deposits of Europe. Taking for consideration the gravel beds of St. Acheul and Moulin Quignon, it is certain that no proof of high antiquity is to be obtained from the mass or mode of arrangement of the materials of which they consist. Such confused gravel heaps prove indeed the force and agitation of water, but not the length of time consumed in the accumulation.

Nor can a sure mode of computation be founded on the position which is occupied by the gravels, elevated as they are 80 or 100 feet above the river. If the river formerly ran at this high level and deposited the gravel there, and has since cut its way down to the actual channel, its action must have been formerly incomparably more violent than now, or the time to be allowed must be absolutely beyond all belief. But, in fact, if we may trust observations at St. Acheul, there is no necessity for supposing that it did cut down the valley; on the contrary, the gravel, sand, and loam appear to have been uplifted by an angular  
movement,



movement, which affected the whole valley of the Somme, a movement which is part of a system of disturbances of late date, parallel to and between the anticlinal axes of Boulogne and the Pays de Brai. All the river courses in this tract of France appear to have acquired their parallel directions from this movement. Nor is the problem of the age of the gravels thus rendered definite. For, as these movements were *partial* and irregular, they cannot be computed by the only formula yet proposed, viz., that deduced from the *general* and gradual elevation of Scandinavia, which, however, if so applied, would be satisfied with only forty centuries of elapsed time.

There still remain two other grounds of argument to be touched on. The gravels of St. Acheul, Hoxne, and other places which contain shaped flints are older than the peat beds in the vicinity. This is readily granted: but how much older? The answer is of this kind. Between the date of the flint-bearing gravels, and the date of the peat, certain quadrupeds are supposed to have disappeared, while others became plentiful; and a change took place in the shaping of the flints, which are of more finished workmanship in the later deposits. How much time should be allowed for these events is uncertain; but as cases have occurred of peat containing bones of extinct elks and elephants, there seems no reason on this ground to demand a long interval of post-glacial time between the gravel and the peat. Nor in a general argument, founded on the assumed contemporaneity of man and the mammoth, is there more ground for admitting man to be of immense antiquity, than for allowing to the huge pachyderm the advantage of living nearer to our own time. In such discussions we must not forget the ice-preserved flesh of the famous individual at the mouth of the Lena. And if to effect the improvement of the flints on which already such dexterous handling had been performed, required nine times ten thousand years, what must we think of the human animal, who for all that period has left no better monuments of his ingenuity? This immensity of time, with nothing to show for it, is a heavy incumbrance on the hypothesis. Even if it were conceded that geological evidence might support some extension of the ordinary chronology, and this could be done without violence to other testimony, there is certainly no warrant for proceeding many steps in this direction, along a slippery path, over which time has gathered many shadows, and along which the torch of science sheds but a feeble and unsteady light.

- ART. IV.—1. *The Co-operator. A Record of Progress by Working Men.* Nos. 1-42. London and Manchester, 1860-63.  
 2. *Transactions of the Association for the Promotion of Social Science.* London, 1861 and 1862.  
 3. *Self-Help for the People.* Fifth Edition. London.  
 4. *Les Associations Conséquences du Progrès—Crédit du Travail.* Paris, 1863.  
 5. *Good Words.* London, 1861.

MORE than thirty years ago,\* when exposing the unsound schemes and dangerous theories which, emanating from the teeming brains of St. Simon, Fourier, Owen, 'and others, bade fair to lure many of the uneducated classes to their ruin, we carefully guarded ourselves from confounding the principle of co-operation with these pernicious fallacies; 'we shall speak,' said we, 'of the Co-operative Societies in some future paper, wherein their fundamental principle may be considered practically and theoretically, as it has heretofore been developed in history or in political fiction. Their principle is at least harmless in peaceful times, and might probably be found highly beneficial to themselves, and not less so to the community, from which they cannot so separate themselves as not to form a constituent part.'

In a previous article† we had expressed a favourable opinion of the principle of co-operation, although we foretold the failure of the associations for living together which were then being established. We have since more than once alluded to the subject;‡ but the great progress which has been made of late years seems to call for a more detailed consideration.

The contrasts between extreme affluence and luxury on the one hand, and grinding poverty and want on the other, have in all ages led many of the more active brains to speculate upon the reorganization of society, with a view to produce a more equal distribution of the sweets and bitters of life. Most of these thinkers had a glimpse, more or less clear, of the principle of *co-operation*, that is, of numbers working together to a common end;§ but unfortunately they were unable to distinguish this principle from that of community of goods, with which it has no necessary connexion. Thus we find that the plans which

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\* 'Quarterly Review,' vol. xlv. p. 437.

† Vol. xli. p. 359.

‡ Vol. xlv. p. 208; vol. xlvii. p. 410; and vol. lxxxix. p. 495.

§ In any case where men are working in concert they may be said to co-operate, but, for the sake of convenience, we use the term *co-operation* in the more restricted sense which it has acquired of late years.

have from time to time been broached for improving society by altering the position of the worker usually include modes of sharing the produce otherwise than in proportion to the market value of the labour or capital contributed by each member.

Great success has, indeed, been attained by some associations of a communistic character. The monastic bodies of the Middle Ages, some of which were entirely dependent upon the productive labours of their members for subsistence, attained to great wealth and power; and although such institutions may be unnecessary and even mischievous in the present age, it would be most unjust to deny the great benefits they conferred on society, both by their missionary efforts among the heathen and by keeping alive the flame of learning and civilization through long dreary centuries of barbarism and anarchy. In the present day the Shakers and Rappists, who form communistic associations, enjoy much material prosperity.

In all these instances, however, it must be recollected that communism is not the ultimate object of the institutions, but merely a means to an end. The Shakers and Rappists, as well as the monasteries, are religious associations, the object of joining which is not merely to enjoy a comfortable, easy life, but to save one's own soul or the souls of others. Persons actuated by such motives are willing to submit to the strict discipline necessary for preserving order, economy, and industry, in a community where the usual motives for good conduct and exertion—*i. e.*, that each man receives the reward of his own diligence and skill, and is dependent upon those qualities for his well being—are wanting.

Societies whose sole object in association is communistic life—such as those established by the late Robert Owen in England and the United States—have invariably failed after a short trial. The causes of failure are obvious. There are men, it is true, who are 'gluttons of work'—liking it for the sake of itself, and ready to undertake it irrespective of reward; but these form the exception. The great majority of mankind, though really happier in employment than they would be in idleness, have not taste enough for labour, nor sufficient self-control to set themselves to work unless stimulated by some extraneous reward, and many cannot be induced to toil by any motive less strong than the pressure of necessity. A member of a communistic body, therefore, seeing that however hard he works he receives no more than the idlest man in the institution, is not likely to exert himself much, and thus the labour upon which the maintenance of the community depends becomes more and more inefficient. Again, the number of children who must have to be supported in such an institution must necessarily be very

large. A man in the ordinary position of responsibility either postpones his marriage until he sees his way to being able to maintain a family comfortably according to his station, or he is obliged to atone for his imprudence by great labour and close economy. But as all the offspring of a member of a communistic association must be supported by the community, he has no motive either to delay his marriage or to make extra exertions to maintain the beings he has brought into the world. Such a society, therefore, would be soon burdened with the support of a great number of unproductive members, at the time when the inefficiency of the productive labour would be sapping the means of subsistence. It is not, then, a subject of wonder that, except where the bond of religious enthusiasm has enabled a very strict discipline to be maintained—including, indeed, in most instances the injunction of celibacy—communistic associations have never lived more than a few years.

The failure of these societies, and of some whence the communistic spirit was absent, but which were otherwise based on unsound principles or were ill-managed, not unnaturally begot in the public mind a distaste for all schemes for organizing labour or business except those to which it was accustomed, viz. undertakings by private individuals and partnerships or ordinary joint-stock companies. And indeed some high authorities have condemned co-operative associations of working people, whether for the purpose of trade or of manufacture; Mr. J. S. Mill being, we believe, the only leading political economist who has written in their favour.

Much misapprehension prevails about the effects of competition. The common opinion, that it will always secure a supply of articles of the best quality and at the lowest practicable price, is certainly fallacious. Mr. J. S. Mill has well shown that, although competition always produces its effect in reducing the profits made by each competitor, it often-times causes no diminution in what is charged to the consumer, the competition taking the shape of the establishment of a larger number of shops, each of course having its working expenses to be met, and interest to be paid upon its capital, before any profit or remuneration for his trouble and risk can be received by the proprietor. It is, therefore, evident that there may be an intense competition in a trade, diminishing its profits to the lowest ebb, while prices are nowise reduced, or are even raised. Indeed the usual effect of this state of things is to produce adulteration, or the giving of short weight and measure—an apparent lowering of price; and then the contest is, who shall most deceive the purchaser.

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It being shown that competition alone is not enough to ensure the best possible service of the public, it seems to follow that there is room for the establishment of some other mode of distribution; and the attainment of this object has been attempted, with what success we shall proceed to show, by the establishment of consumers' societies.

The co-operative system is not, however, confined to distributive stores or shops, but has been largely introduced into manufacturing and other productive industry. Here its success has been considered more unlikely even than in the case of shops. It has been thought that the commercial knowledge and skill requisite for the management of a manufactory and the mutual confidence and harmony among the members, without which success is impossible, would not be found among the working classes. And indeed the failure of numerous attempts of this sort gave much plausibility to this view.

Yet, that some movement of this kind was becoming necessary for our social welfare must long have been perceived by those who looked below the surface of society. For very many years past, the introduction of machinery and the improvements in intercommunication have been effecting a revolution in most departments of industry. The incidents of Hogarth's 'Idle and Industrious Apprentices' will give an idea of how manufactures were conducted in the days of our forefathers. Here the apprentices are represented as working at their looms like common weavers; and yet they are evidently considered not to differ greatly in social status from their employer; since in an early stage of the pictorial story the industrious youth accompanies his master's daughter to church, reading with her in the same prayer-book; and in the end he marries her and is taken into partnership.

In the hardware trades of Warwickshire and Staffordshire, in most of which machinery is little used, a somewhat similar state of things still prevails. Happening once to accompany a friend engaged in the Wolverhampton trade to a lockmaker, of whom he had ordered some goods, we entered a thatched cottage consisting of one room, round which were lathes, work-benches, vices, &c., at which a number of men were employed, among whom was our manufacturer. The workshop, it appeared, belonged to one of these artisans, the others paying him half-a-crown per week each for his standing and the use of the large tools. Yet the men were all working on their own account, taking orders directly from the merchants and factors. From this class there is an imperceptible gradation up to the greatest manufacturers  
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of the neighbourhood, and in these districts strikes are little known.

Far different is the state of things in the textile and mining districts. Here the trades have long been in the hands of large capitalists, between whom and the workmen there is a very wide gap. Much evil has arisen from this sharp division of classes; for, although the indomitable energy and perseverance of some workmen enable them to rise into the rank of employers, yet such cases, though absolutely numerous, are so few in proportion to the number of the artisan class that the latter look upon their employers as belonging to a body quite distinct, and indeed hostile to themselves. Accustomed to subsist on weekly wages, and having no experience of the cares and anxieties of commercial affairs, the men are very apt to regard their employer as a drone who lives on the honey produced by their toil. Indeed it is a favourite doctrine of workmen—even of the more intelligent of the class—that profits belong of right to labour, and that the employer is entitled to nothing more than interest on his capital—forgetting the value of his services as manager, and the fact that wages are paid whether profits are made or not, and even when the capital is being diminished by losses. Such fallacies arise from always looking on one side of the case, the necessary consequence of the over-perfect division of classes. The evil effects of these mistaken notions are seen in the ruinous strikes which have frequently occurred in these districts and in other proceedings of the trades' unions there. But here we would guard ourselves from being supposed to condemn those associations altogether. Much as we deplore the follies and even crimes of which many of them have been guilty—setting at nought not only the most fundamental rules of political economy, the plainest dictates of common sense, but what is far worse, the laws of God and man—we cannot but see that, in a trade where the employers are few in number as compared to the workmen, combination of some kind is necessary to enable the latter to deal with the former on anything like equal terms. Even strikes, mischievous as they are, may be sometimes—like their frightful prototype war—a sad necessity. And, from the fact that a strike not unfrequently terminates in the men's obtaining their demands, it may be inferred that employers sometimes endeavour to pay lower wages than are justified by the state of the labour market. Far be it from us to argue that combinations of either masters or men can permanently alter the rate of wages in a trade, which of course must depend on the relation of the supply to the demand for labour; but at any particular

particular time a compact body of masters might keep down wages below what would be the market rate were there an opportunity for free 'haggling,' as Adam Smith calls it, between individuals. Besides, an individual workman would be in a state of almost slavish dependence, had he not a union to support him; and it is little consolation to him to be told that, in the course of some, perhaps many, years, the mischief would work its own cure by the operation of the well known laws of political economy. So long as the present relations remain we feel certain that combinations of this kind will subsist between the men, as they always do, in some form or other, between the employers. Those who wish to remove the evils caused by trades' unions and strikes should therefore endeavour to instruct the artisans in the truths of political and social economy, so as to direct the action of their combinations aright, rather than attempt the hopeless task of inducing them to forswear those societies altogether.

There is nothing unjust in the relation of employer and employed, the former paying to the latter wages, and taking the profit and loss of the concern; on the contrary, that relation has been productive of much benefit to both parties, and particularly to the employed. Still the position of the latter is one out of which a prudent and thoughtful man must be anxious to emerge, if he can do so by fair and honest means. A worker for wages cannot help feeling that he is in a somewhat passive state, that his fortunes are not in his own hands,—that he is in a great measure dependent on the will of another. Again, he who simply receives a periodical sum which continues or ceases owing to the operation of causes beyond his control is to some extent in the position of a child, not getting that education and training in the affairs of life which arises from taking part in the transaction of business; and consequently we find that artisans are, as a class, imprudent. It is not, therefore, to be wondered at that there is a strong, and, indeed, an exaggerated, feeling among many of the handicraftsmen against the system of working for wages, and that the more thoughtful of them, both here and abroad, have been casting about for some mode of placing themselves in a position to be their own masters. Still, the strong tendency of business to concentrate itself in large concerns leaves no doubt that, so far from any more openings occurring than heretofore for men to alter their condition by becoming small manufacturers, it is probable that that class will be eventually superseded, even in the trades which are now in its hands. The only course, therefore, left open to workmen who have an ambition to emerge from the condition of mere wage-earners is *combination of means*. And here they have the benefit of the example of the  
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classes above them. They see how, by the aggregation of the comparatively small contributions of great numbers of persons, vast enterprises, involving the construction of huge waterworks or gasworks, railways costing many millions, and fleets of steam-vessels, are carried into effect to the great benefit of the public, and generally to that of the shareholders, and they naturally ask, why should not working men accomplish objects which are less colossal in proportion to their own means than are these undertakings as compared with the wealth of the middle classes?

In England until recently the laws of partnership threw hindrances in the way of the conduct of ordinary business by combination; but the passing of the Limited Liability Act, and of the Provident Societies' Act of last year (which among other provisions extends limited liability to Provident Associations), has removed nearly every obstruction. Owing probably to the defective state of the law here, the successful establishment of associations by handicraftsmen for conducting works and manufactures began earlier on the Continent than in this country, where the co-operative spirit took at first the form of societies for supplying the members with articles of consumption by means of shops and flour-mills.

During the last seventy or eighty years many attempts have been made to establish something of this kind, but until about twenty years ago we believe all the enterprises established by the working classes proved failures (owing, as it is supposed, mainly to their having adopted the unsafe practice of dealing on credit); and of those founded by the middle classes, such as succeeded soon ceased to be consumers' associations, in the proper sense of the word, becoming mere ordinary trading companies.

The real working men's associations may be said to have had their origin in the Leeds Corn-mill and the society called the Equitable Pioneers at Rochdale. The great success of the latter body, and the fact that nearly all the co-operative stores, now so numerous over the kingdom, have been modelled more or less after it, will justify us in giving its history in some detail.

In the year 1844 a few poor flannel-weavers of Rochdale, belonging to the numerous class of workmen who were dissatisfied with their lot, after casting about amongst various schemes for amending it—as Owenism, Chartism, &c.—at last thought that if they were unable to devise any mode of increasing their income they might at any rate economise their expenditure. They knew that the prices charged at the shops where they dealt were greatly in excess of what the goods might be bought for wholesale with ready money. The numerous shopkeepers, they were aware, had each to pay rent, rates, taxes, expenses of advertising,



advertising, and to obtain a living profit from a small aggregate of returns. They saw also that the tradesman gave long trust to most of his customers, thus making bad debts; and that as his own capital was but slender, he was obliged to take credit from his wholesale dealers, and therefore was not able to buy in the cheapest market. The shrewd northern intellects of these weavers perceived, therefore, that if they had self-denial enough to eschew credit, and put by something weekly out of their slender wages until they had accumulated a small capital to begin with, they might supply themselves on much better terms than by dealing at the shops.

It would, however, be a great mistake to suppose that these men were actuated merely by the desire of cheapening their consumption. They belonged to the thoughtful, earnest portion of the working classes, who, however they may for the time be led astray by false lights, are sure in the end to find the true road. They are of the stuff of which our Arkwrights, Hargreaves, and Stephensons are made. They had that, without which we believe no great social improvement was ever effected, a strong moral feeling—a deep conviction of the rightfulness and weightiness of their cause. They had been Owenites, and had much of the philanthropic benevolence of their amiable though sadly-mistaken leader. The best part of Owen's doctrine was a strong objection to the credit system of dealing; and to this principle these worthy weavers clung tenaciously. Again, several of them had a conscientious scruple about taking an oath, so that they would have been at the mercy of any dishonest debtor who chose to drive them into court for their due. Some of them, indeed, had a tenderness with respect to suing, and would rather lose money than go to law to recover it. They therefore determined neither to take nor to give credit; and from this resolution they have never swerved. Most fortunate for them was this determination, for in the hands of men so ignorant of business as they were at starting, credit would have been a most dangerous edge-tool. But the necessity of paying at once for all that they bought kept them out of speculation; and to this their coming safely through many perilous conjunctures may be attributed.

Meetings were held to form a store association, at which let us record the names of James Daley, Charles Howarth, James Smithers, John Hill, and John Kent, as taking an active part. With the straightforwardness and honesty which characterised all their proceedings the promoters placed themselves at once within the control of the law, enrolling the concern under the *Provident Societies' Acts* then in force.

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With the simplicity which often accompanies great earnestness of character, these honest men believed that they were to regenerate society altogether, putting forth their views in language which would have been almost ludicrous were it not that the actual results, though not, indeed, fulfilling the whole of the programme, have been so great and beneficent.

The *modus operandi* by which this grand scheme was to be launched was the contribution of two-pence a-week by each of the twenty-eight (afterwards increased to forty) promoters. This payment was subsequently raised to three-pence, and the collection was continued until 28*l.* had been gathered, when a small shop was taken in a back street called Toad Lane—a corruption of 't' Ode (the Old) Lane—at a rent of 10*l.* per annum. William Cooper—then a mere youth—was appointed cashier, the benefit of whose able and faithful management the concern still enjoys; and Samuel Ashworth undertook the duties of salesman, which, however, were at first but light, since, after fitting up the shop, only some 14*l.* remained wherewith to purchase goods; indeed, a neighbouring tradesman said, in derision, that he could wheel away the whole stock in trade in a barrow. But the worthy pioneers had more serious discouragement to bear than ridicule. Their ignorance of the trade they had taken up, and the slenderness of their capital, prevented them from obtaining their goods either of the best quality or at the lowest price. And thus the more lukewarm of the members were discouraged, and began to discontinue dealing at the store.

This unfaithfulness in dealing—so to speak—is the most constant subject of complaint of co-operative store associations in their earlier days, many of the members and their wives being unwilling to make the temporary sacrifice of going a somewhat longer distance to effect their purchases, or of putting up occasionally with goods not of the best quality, which must sometimes be supplied, owing to the mischances necessarily occurring before the committee has acquired experience in the business. As the meeting the expenses and making a divisible profit depend upon the amount of sales, dealing constantly at the stores is naturally looked upon as the duty of an earnest member. When a concern has passed through its early difficulties, and has become prosperous, interest and duty go so clearly together that the complaints cease. In the Rochdale Store the evil was so severely felt that a proposal was once made to pay out those members who did not deal regularly, which, however, was rejected on the ground that it would interfere with the freedom of action of the associates.

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And here we would mention a very important principle introduced by the Rochdale Association\*—the division of the profits among *purchasers*—which was originally proposed by Mr. Charles Howarth, one of the founders. In all previous concerns of the kind the profits appear to have been divided among the members in proportion to the shares each held in the concern, but the Rochdale Pioneers determined that, after paying a fixed percentage upon the capital, and setting aside a sufficient amount for a reserve fund, the remainder—the profits properly so called—should be divided among the customers rateably on the amount of their purchases. And, assuming that the capital is well secured (and that the members think so is proved by the fact that the Association, except in its earliest years, has always had a redundancy, rather than a deficiency of capital), this is clearly the just mode, the real co-operation. A number of persons associate to enable themselves to buy goods on more advantageous terms than they could do separately. As there are outgoings to be met, in the shape of working expenses, loss from goods spoiling, deterioration of stock, &c., it is necessary to sell at an advance upon the cost price; and, to be on the safe side, this advance should be sufficient to cover the maximum of outgoings. Under these circumstances it is clear that, as a general rule, there will be a surplus at the end of the quarter, and after a fair interest has been paid to the owners of the capital, this surplus evidently belongs to those whose purchases have produced it. It is, indeed, simply restoring to them the excess of what they had paid on an estimate of outgoings over what has proved to be the actual amount. The ordinary course is to charge the prices usual in the shops of the town, supplying, however—what those establishments do not always afford—a genuine article of good quality, and in full weight or measure.

This mode of dividing profits is a very important cause of the success of co-operative shops. It suits itself exactly to the circumstances of the poorer classes. A man when admitted to membership is usually required to take five shares of one pound each, upon which he pays three pence a week until the amount is made up. He deals at the store, receiving at each purchase tokens showing what he has spent; and on the declaration of profit after the periodical balancing of accounts, he becomes entitled to his quota of dividend on the amount of tokens produced—sixpence, a shilling, eighteen pence, or even two shillings and upwards in the pound, as the case may be. His profit, by the rules of most

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\* It is alleged that a co-operative society in Scotland adopted this plan at an earlier period; but, at any rate, it was an independent discovery in Rochdale, whence it has spread over the country.

societies, he must leave in the concern until the five shares are paid up, though in some stores this is not obligatory. He may, however, hold any number of shares within a maximum prescribed by the rules of the society, which by law might not before the Act of last year exceed 100*l.* in amount, but it may now be 200*l.* In all Societies a member may take out at his pleasure any money standing to his account above the minimum amount of paid-up share-capital, and, upon satisfying the Committee that he is pressed by necessity, he is permitted to diminish even that minimum. A man who deals at a store pays no more per week for his goods than he would do at an ordinary shop, and yet at the end of the quarter he finds placed to the account of his shares a sum of from five or six, perhaps to twenty shillings and upwards, according to the amount he has spent and to the success of the Society; a sum coming to him, as it were, out of nothing. Supposing, what is usually the case, that the store does well, a man who has never saved before finds himself in possession of a sum to his account which, if he is prudent, he leaves in the concern, unless he requires it for some useful purpose; and many members have thus accumulated considerable amounts—70*l.*, 80*l.*, and even 100*l.*, and upwards. It is true that an initial effort must be made, viz., the payment of ready money, which, to one who has all his life lived on credit, is by no means an easy achievement. Still, the sight of so many of his comrades doing well around encourages him to the requisite exertion, and thus he is started in the road of economy.

The importance of such a start will be easily appreciated by those who have much knowledge of the poorer classes. The habit of living on credit indisposes a man to economy. Any diminution which he may make in his expenditure only lessens by a little the balance against him in the tradesman's books; and the time when he will be beforehand with the world seems so distant that he gives up the attempt as hopeless. On joining a co-operative store, however, many men have paid off their previous shop-debts out of the dividends upon their purchases, and have then begun a course of thrift. In one or two Societies a fund has been set apart to enable persons desirous of entering to clear off their scores, the loans for this purpose being repaid with interest out of the borrowers' profits; and as these loans are advanced on the security of the paid-up capital of members who are willing to be surety for the debtors, they can hardly lead to loss.

It will at once be seen that a co-operative society must be far more attractive to a poor man than a savings-bank, even where the credit of that institution is perfect. At Rochdale, indeed, the

the failure of such a bank threw the people upon the Equitable Pioneers' Association as the only mode of investing their savings.\*

In 1845, the Pioneers took out a licence to deal in tea and tobacco, and began the sale of those commodities. Here, however, an increase of capital was needed, which, trifling as it may seem in amount, was by no means easily effected. Still the circumstances of the members had evidently improved. The original contribution towards starting the society had been twopence per member per week, and with much difficulty it was raised to threepence. At the meeting, however, at which the tea and tobacco enterprise was resolved upon, one member 'promised to find' half-a-crown, and another five shillings, and a third the enormous sum of one pound. At the close of 1845, the store numbered eighty members, and had a capital of 181*l.* 12*s.* 3*d.*; the weekly sales averaged 30*l.*; and the interest paid to the 'capitalists,' which at first had been 2½ per cent., was raised to 4 per cent.

In March, 1845, it was determined that the store, hitherto opened on the evenings of Mondays and Saturdays only, should transact business on four evenings and afternoons in the week; and in October of the same year the sale of butcher-meat began. The concern continued to advance slowly but surely; by the end of 1846 the capital had increased to 252*l.*, and the weekly sales to 34*l.*

In 1847 trade was bad, and some of the members were obliged to withdraw part of their capital to support themselves. This pressure upon the work-people had, however, a favourable effect on the society, for it caused many, who had hitherto not felt sufficient inducement to join, to come in and economise their scanty earnings. In the following year, when times were still worse, the association made unprecedented progress: the members increased to 140, the capital to 397*l.*, and the weekly receipts for goods to 180*l.* The remainder of the old building, in the ground floor of which the shop was originally established, was now taken to accommodate the increasing trade; and the collection of the weekly contributions to capital was no longer made at the houses of the members, who henceforth brought their quotas to the store. In 1849, a most important step was taken, namely, the opening of a reading and news room, in

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\* The establishment of the Post-Office Savings Banks—wherein each depositor has the direct security of Government, and which are already spread far more widely over the land than the old savings banks (outnumbering them by four or five fold)—is a great boon to the working classes, of which they are showing their appreciation by depositing largely.

which

which the weekly meetings of the directors were held, instead of at a public house as theretofore.

By 1850 the members numbered 600, holding a capital of 2299*l.*, making a weekly return of 338*l.*; and in April, 1851, the store having then attained its seventh year, was directed to be kept open every day, and all day. Mr. William Cooper was entrusted with the important duties of superintendent, and two paid shopmen were engaged, their functions having hitherto been performed gratuitously by members. In 1851, although the associates somewhat increased, the sales rather fell off; but the following year was marked by a great accession both of members and prosperity, which continued without intermission until the concern reached its present vast proportions.

The rapid increase in sales and in members, many of whom dwelt in the outskirts of the town at a considerable distance from the store, induced the Pioneers from time to time to establish branch shops to bring the accommodation as nearly as possible to every door; and now the number of establishments amounts to sixteen—not, however, all general shops, some being confined to particular trades, as tailoring, shoe-making, clog-making, &c., wherein members are employed as workmen.

We have mentioned that a newsroom was established in an early period of the Society's history. Subsequently a rule was made, that a fortieth part of the profits should be set aside for educational purposes; and with this provision an excellent library, numbering 4000 volumes, has gradually accumulated. There are two commodious reading-rooms, hung with good maps, and containing desks well supplied with newspapers, including the leading journals of the day. All the arrangements are simple and unostentatious, but well adapted to secure the comfort of the readers. It was fortunate for the Rochdale men that they adopted this resolution early; for, after the passing of a new Act of Parliament repealing and consolidating the provisions of the Provident Societies' Acts then in force, by some (no doubt accidental) change in the wording, the law was so altered that the Registrar, Mr. Tidd Pratt, found himself constrained to decline to certify any rules including the provision for setting aside a portion of the profits for education. We may be quite sure that so enlightened an officer would not have thrown hindrances in the way of the attainment of such an excellent object save under the absolute compulsion of law. But it was a most unfortunate mischance, which has prevented many societies from following the example of the Rochdale Pioneers in this particular. The Act of last year has, however,

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at length set matters right by leaving the members to deal with their profits as they think proper; and we learn that several societies have already altered their rules accordingly.

In 1850 a Corn-mill Society was formed in Rochdale in imitation of the one alluded to before which had been for some years in successful working at Leeds, its object being to buy and grind corn, and distribute it on principles similar to those of the Rochdale Store. The new enterprise was set on foot chiefly by members of the Equitable Pioneers' Society, which concern invested upwards of 400*l.* in the mill. In its earlier days, owing to some mishaps and errors, this undertaking caused a serious loss.

The failure of the Rochdale Savings Bank had greatly stimulated the practice of investing in the Pioneers' Society; but now a notion got abroad that the latter was so implicated in the mill as to be unsafe, and a run upon it was the consequence. The straightforward directors placed the cashier behind the counter with orders to pay each demand as it was made. One man who held 24*l.* came to give notice to withdraw 16*l.*; the remainder he was willing to risk to avoid pressing too hardly, as he thought, upon the concern. Though much surprised at being asked to 'tak brass' at once as the regular notice was waived, he carried the money home, where he kept it in a stocking-foot for eighteen months, and then replaced it in the Society. A woman demanded her money with much determination, but when it was offered her, seeing that all was safe, she declined to take it. Another woman, however, who held the (for her) very large sum of 40*l.*, generously refused to withdraw it. When advised to do so on the ground that the store would break, she answered that she never had a shilling in hand before she became a member, adding, 'If it does, it will break with its own; all has been saved out of my profits—all I have it has given me.'

Such conduct, it will be well understood, soon allayed the panic; and upon its becoming known that 2000*l.* belonging to the Pioneers remained in its bankers' hands untouched, the commercial reputation of the Society rose to a higher pitch than ever.

The incidents of this panic showed the great advantage of the ready-money principles upon which the Pioneers had acted. Had they launched out into credit transactions they could not have met the run, and much difficulty and loss of reputation must have occurred, and the Society might even have been broken up.

The corn-mill (which, having been placed under the able management of Mr. Greenwood, one of the Pioneers, had become

come very prosperous) turned out a perfectly pure flour ; but this article did not produce so white a bread as the ordinary alum-mixed flour to which the Rochdale people were accustomed. The well known prejudice among the lower classes in this country, against bread which has any colour, caused so great an outcry, that the co-operators were for a while obliged to yield, and adulterate (avowedly) with alum ; but this was so opposed to their love of the genuine in everything, that they soon began to discuss the matter with their customers, and at last persuaded them that it was wiser to eat what was wholesome for the stomach than what was merely pleasing to the eye ; so that pure flour was taken into favour, and has become the taste of the people of Rochdale. The hired mill in which the business was begun has long been dispensed with, the Society having erected a noble building fitted with machinery of the best and newest construction, which grinds nearly 1700 sacks of flour, meal, &c., per week. In addition to the Rochdale store with its branches, the mill supplies the co-operative shops of the towns and villages for many miles around.

In 1856 an association was formed in Rochdale for the purpose of manufacturing cotton ;—as may be supposed, the leading spirits were of those who had been instrumental in founding the store and the corn-mill ; and the Pioneers' Society invested a large portion of its superabundant capital in this undertaking. The manufacture was at first carried on in shops hired in different parts of the town ; but within four years from their starting the co-operators had built a new mill of their own,—a large, substantial, and very handsome structure of red brick in the outskirts of Rochdale, standing upon land taken upon a nine hundred and ninety-nine years' lease. They have been their own architects, employing professional aid only to prepare the requisite drawings, and engaging a stone-mason as clerk of the works. The edifice contains all ~~the~~ modern improvements, and is superior to most of its kind in height of rooms and provision for ventilation. It has cost upwards of 40,000*l.*, every farthing of which was paid before it was opened, which was early in 1856. Before this time, however, the foundations were dug for another mill, which has been completed, though, owing to the present depression in trade, it has not yet been fitted with machinery ; but it seems probable that this will be done ere long.

One of the original provisions of the manufacturing association was that a certain proportion of the profits should be handed to the workers. By this bonus in addition to the ordinary rate of wages, the Pioneers commanded a choice of the best hands,  
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who, by sharing the profits and also working by the piece, acquired a wholesome interest in the amount and quality of the work turned out. Unfortunately, however, the success of the undertaking induced a number of persons to invest in it who were not imbued with the long-sighted and liberally sagacious principles of the founders; and this class, consisting to some extent of ordinary workers in other manufactories, but in great measure of over-lookers, foremen, shopkeepers, &c., became the majority. Considering that the workmen received the full value of their labour in the shape of weekly wages, the new members begrudged them their participation in the profit, and moved a resolution to discontinue it, which was ultimately passed by the requisite number of votes. This change subjected the association to the charge of swerving from its principles of co-operation; but we do not see the justice of this accusation. Co-operation means 'acting together;' the members, by putting together their small means, and thus forming a capital sufficiently large to manufacture on a profitable scale, are assuredly *co-operating*, and it is difficult to see how they can lie under any moral obligation to share their profits with those who have received in the shape of wages the full market value of their labour, to say nothing of the advantage of working in a manufactory built, as this is, with special regard to the health and comfort of its inmates, and who have undergone none of the risks of the concern. The *policy* of the measure is another question. It is very probable that the prosperity which the manufacturing association enjoyed arose, in a considerable degree, from the practice of sharing the profits with the hands. Such an arrangement could hardly fail to engender a community of feeling between the workers and their employers the members, which must have had a beneficial effect in stimulating industry and care, and in preventing the operations of the concern from being hindered by strikes. Soon after this change was made the American civil war broke out, and the depression of the cotton manufacture began; it is difficult, therefore, to judge how far the withdrawal of profits from the workpeople has affected the prosperity of the undertaking. As a matter of fact, however, this manufactory was, we believe, the last in the town to begin running short time, which it did for two or three months only, and one of the first to resume full working, when recently the trade somewhat revived.

The prostration of industry in the cotton districts began to tell even on the robust constitution of the Rochdale Pioneers' Association (the store), as is shown by the fact that the number of members diminished in 1862 by 399, and the capital withdrawn

exceeded that paid in by 15,766*l.* But, when it is remembered that this great amount has been spent mainly in supporting members and their families who would otherwise have been dependent on public charity, some idea may be formed of the immense benefits conferred by this Society on the members and the community in general. Happily the Pioneers are already recovering from this depression; for the report of the first quarter of the present year shows 4000 members, 43,000*l.* capital, and 37,525*l.* of sales in the quarter (equal to 150,100*l.* in the year), all which amounts are much in excess of those of last year; and the very large dividend of 2*s.* 5*d.* in the pound has been paid to purchasers. It may be said that the amount returned to the members as profit has been first put on; but the fact is that the prices are those charged at the shops in the town, and that the large bonus which the Society is enabled to pay results from the absence of bad debts, from the advantageous purchases that the magnitude of the transactions and command of ready money enable the directors to effect, and from the very low rate of working expenses, which, including interest of capital, amounts to *two per cent.* only on the returns,—a result from a retail shop almost incredible, and which can only be explained by the great amount of business done, and the simple and efficient manner in which it is transacted. That material prosperity has not rendered the Pioneers sordid is proved by the fact that, besides affording aid to some of their own members who had been reduced to distress by the cotton famine, the Store Society for a long time gave 10*l.* weekly, and are still, we believe, giving 7*l.* to the Relief Fund; and two or three years ago it presented to the town of Rochdale a handsome drinking fountain, modelled after that in the Regent's Circus, London. The Corn-mill Society and the Manufacturing Association have also contributed liberally to the Relief Fund.

In addition to these efforts Turkish baths have been established by a small association formed by some of the Pioneers. Out of the original association has arisen also a building society, which, before the depression began, erected twenty-three comfortable cottages outside the town. These are now all tenanted, and when better times arrive many more will doubtless be built.

The constitution of the Rochdale Pioneers' Association is simple, and appears to work well. The ordinary management is entrusted to a board of directors, who meet weekly; and every month a general meeting of the Society is held, whereat each member has an equal vote. These frequent assemblages afford ample opportunity for making complaints and venting dissatisfaction, which is found effective in letting out ill-blood that might otherwise

otherwise disturb the general harmony. Not only have the Pioneers never gone to law, but no occasion has ever arisen even for the services of the arbitrators appointed by the Society's rules in pursuance of the requirements of the Act of Parliament. As may be supposed, an institution of this character on so large a scale in a town of moderate size like Rochdale must exercise an important influence; and in effect, we learn that prudence and temperance have made great advances there of late years. Many instances are mentioned in 'Self Help for the People,' of individuals having accumulated considerable sums, who, before becoming members of the Society, had never had a pound in hand, being, indeed, always in debt.

When the success of the Rochdale Pioneers became known, stores were established in other districts upon similar principles, and they are now to be found in most parts of the country. Many of these concerns have grown to large dimensions, and have had much success, and the movement, although somewhat checked in Lancashire by the unprosperous state of trade, is yet advancing rapidly. In Mr. Tidd Pratt's return of April last, which is confined to England and Wales, we observe 332 associations recorded as being then registered under the Provident Societies' Acts. Of these, five conduct corn mills only, two combine grinding corn and other manufacturing pursuits with general dealing, one confines itself to butchering, one to the sale of tobacco and snuff, one to that of coals, two to baking and flour selling, two to the sale of hosiery and clothing, and one to tailoring. The remainder are, with three exceptions, general shops, selling provisions and grocery, though many add baking, butchering, tailoring, shoemaking, dealing in drapery, &c., to their other functions, while some seem to confine themselves to groceries only, and one combines farming with general dealing. Only one society deals in beer. There are probably several stores which have not yet put themselves upon the register, for it is not uncommon to delay taking that step until a society has been for some months in existence, and considers itself established. The three exceptions alluded to are the only purely manufacturing concerns which are formed as Provident Societies, the others (including the Manufacturing Society of Rochdale) preferring to register under the Joint Stock Companies Acts, probably because, until the passing of the Act of last year, limited liability was not accorded to provident associations. In Scotland also there are many co-operative stores, and a few have been formed in Ireland.

The associations returned by Mr. Tidd Pratt contain, in the aggregate, 90,458 members, or on an average 280 each, of whom

24,308 have entered within the year, against 11,529 withdrawn. Their paid-up share capital amounts to 429,315*l.*, about 4*l.* 12*s.* per member. 172,561*l.* has been withdrawn within the year, against 111,347*l.* invested. In the ninety-eight Lancashire societies the withdrawals amounted to 179,000*l.*, and the investments to 66,000*l.* only, and the members retiring were 8481, against 5968 admitted. It will thus be seen that in the remainder of the country the co-operative stores have advanced rapidly both in members and in wealth. The falling off in Lancashire is obviously to be attributed to the great depression of trade having compelled the members to subsist upon their capital, which most of them would not have possessed at all but for the stores. The aggregate amount of sales was 2,331,650*l.*, and the profit realized 165,000*l.* This, however, appears to include, in most cases, the interest paid to the owners of capital and the quota added to the reserve fund. In nearly all instances the profits, after meeting these charges, are divided among purchasers. In many societies non-members participate in the profits, taking, however, a smaller proportionate share than members. Indeed, the main principles of the Rochdale Pioneers have been copied more or less by nearly all the other societies, many of which have already become large, wealthy, and most beneficial to their members, and, indeed, to the public in general; as their constant sale of pure wares in full weight and measure has compelled the neighbouring tradesmen to follow their example, and thus false dealing has been greatly checked. There is little doubt that this feature of co-operative stores will be permanent, for as the members who govern the concern form the bulk of the purchasers, they have every motive to enforce fair dealing. This annihilation of the antagonism of interest between buyer and retail seller, out of which arise most of the moral evils too often attendant upon trade, is one of the great benefits of the co-operative system.

One feature brought out by Mr. Tidd Pratt's return is not of a character altogether pleasing, namely, that 163 of the concerns (nearly one-half of the whole number, though not so much in extent of business) do not act strictly on the ready-money principle; of these, thirty-nine societies take credit without giving it, and thirteen give credit to their purchasers without taking it from their wholesale dealers. In most cases the credit given is short, and only upon the security of capital paid up by the buyer: still the ready-money plan is far preferable, as it greatly tends to simplicity in bookkeeping and management, and enables the society to buy at the greatest advantage; besides which it is an admirable moral training for the members. Some associations  
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which began by taking and giving credit have discontinued that practice; and we are informed that all have found the change highly advantageous.

There have been, unhappily, several instances of loss from the dishonesty of shopmen and managers; more particularly in the credit societies. This is the less to be wondered at, as those officers are frequently much underpaid, considering the responsible functions entrusted to them. One of the fallacies prevalent among the working classes is, that each man is entitled to an equal income; they think it, therefore, unjust that their shop-keeper should earn more per week than themselves, forgetting that he to whom much is entrusted should have a reputation for probity, which, like superior skill, or any other valuable quality, must command its price. In proportion as men become conversant with the true principles of management, such errors will be corrected.

Hitherto, except that the village stores have frequently made their purchases of the larger concerns in the neighbouring towns, co-operative societies have usually bought their goods of the ordinary wholesale dealers as is done by individual tradesmen, though the magnitude of the Rochdale Pioneers' Association has enabled it to employ agents in Ireland, and elsewhere, to buy provisions in large quantities; but a movement is now on foot to establish wholesale agency concerns on the co-operative principle; and as these bodies will buy for a great number of Stores at the same time, each of the latter, however small, will have the advantage derivable from purchasing on a large scale. Some co-operators, however, think that a central wholesale warehouse would be better; and probably both plans will be tried; for as the Act of last year authorises Provident Societies to hold shares in other (limited liability) concerns, there will be no difficulty in raising the requisite capital.

A pleasing feature of the co-operative stores is the practice, which is becoming pretty general, of having periodical social gatherings of the members and their wives and families, when, after tea, the company are entertained with speaking, singing, music, and recitations; and the evening frequently winds up with a dance: thus one of the great desiderata for our working people, innocent cheerful recreation, is attained.

It must not be supposed that these co-operative stores are confined to large towns and manufacturing districts. There are several flourishing concerns (though, of course, on a small scale) in rural villages. Much good may often be done by a clergyman, or country gentleman, by putting his village neighbours in the way of obtaining information upon the best mode of starting  
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and conducting a store; but we should not advise him to lend money for the purpose, or to encumber the members with too much assistance. The Rochdale principle of incurring no debt of any sort is the only safe one; and although the progress may be slower at first than if credit were taken and given, it is thoroughly sound, which is far better than a rapid rise, followed perhaps by a still swifter fall. The moral training effected by the accumulation of a capital from a number of small weekly contributions is an invaluable preparation; and, indeed, the amount needed to begin with is not large. A London society, which now has two shops, and is returning more than 4000*l.* yearly, began with *four shillings*, wherewith a pound of tea was bought at the wholesale price, and retailed among the members in ounces; with the proceeds more was purchased, the profits being reserved and placed to capital; and in this manner a stock in trade was obtained. We should, however, think it wiser, even in a rural store, to wait until a few pounds had been gathered by contributions. There is hardly a village—even where a shop is not now supported—in which a small store may not be successfully established; for such a one can be carried on in a room of a member's cottage with very little expense.

In London the co-operative movement does not advance so fast as in some of the provincial districts. There are, it is true, nearly thirty associations in the Metropolis and its neighbourhood, but they are not on a large scale, returning in the aggregate less than 60,000*l.* yearly. This must be attributed in great degree to the almost entire absence of acquaintance among neighbours. We attended the quarterly meeting of the Society mentioned above, and learned from what was said that the members' abodes were spread over a district of many miles in extent; and although they all had their daily occupations within a short walk of the shop, the inconvenience of buying and carrying home their articles of consumption was considerable. We believe the opinion is growing among the London co-operators that the system will never have a fair chance until the various Societies in the Metropolis are blended into one, their shops becoming branches of a central store. If this were done, every co-operator would have one of the shops sufficiently near to his home to enable him to deal there conveniently; but much progress must be made before such a union is practicable. A movement is, however, now on foot for the establishment in London of a central wholesale establishment, and also a flour-mill and bakery to supply the various stores. Being banded together for these purposes, the Societies will, perhaps, after a while find themselves in a position to blend into one great Association. The  
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economy with which business might then be conducted must be signal.

But it may be said, how will the extension of this class of stores affect tradesmen? In Rochdale it would appear that since the establishment of the Pioneers' Association private shops have not increased with the growth of the town, and, indeed, several of the smaller ones have been closed; but nowhere else has co-operation been carried to anything like the same extent, and we believe that hitherto its effect has been scarcely felt by tradesmen. Still, if the system is to reach the proportions which seem probable, it must come strongly into competition with shops selling the same sorts of goods, and these in some districts may have to succumb. If this should come to pass, unmerited loss and suffering may result. Such a consequence, of course, is to be regretted, but it is an evil inseparable from social improvement. The introduction of railways compelled coach-owners, waggon-owners, wayside-innkeepers, and others, to change their employments, and, in some instances, with but little warning. It is not likely that co-operative shopkeeping will increase so rapidly as to injure greatly those who are now engaged in trade, though it may prevent others from commencing business. And with regard to persons who might have opened small shops, such as are frequented by the poorer classes, it is, perhaps, even merciful to prevent their sinking their little all in undertakings which so often prove failures.

In France before the *coup-d'état* there were several co-operative stores which were doing well, though it seems that they had not hit upon the plan of dividing profits among purchasers. Owing, we believe, to the state of the law, their sales were confined to members. All Associations of working-men were looked upon with suspicion by the Government, who feared they might be used for political purposes, and the *gérants* of these stores were among those who were arrested and deported. The concerns never recovered from this blow, and soon disappeared. We learn, however, that encouraged by the great success of co-operative shops in England, a movement is on foot to re-establish these undertakings in France.

In Germany there are about fifty stores, but they do not seem as yet to be on a large scale, the co-operative movement in that country having flowed chiefly in other channels. They are, however, increasing. The laws relating to guilds restrict Societies of this kind from selling to any persons except members. In America and Australia a few co-operative stores have been started, some of which bid fair to have much success.

Associations for carrying on manufactures and works differ much

much in their circumstances from those whose object is economy of distribution. The latter start with a ready-made connexion of customers, while the former have to make their way with less advantage in this respect than is enjoyed by private undertakings. Their members are also brought closer together, and their interests are far more intimately mingled than in a store-society; so that causes of disagreement are more likely to arise. The unity of action consequent on the absolute power exercised by the master of a private undertaking, and the keen sagacity conferred by long practice in management, cannot be expected in a body of ordinary workmen. On the other hand, all who have tried the experiment know that the labour of a man having an interest in the product of his work is far more effective than that of one who is simply paid by time; hence the admitted advantage of piece-work over day-work, wherever the former is practicable. Indeed a man who works for time-wages is under some of the disadvantages of a slave. Like that unhappy being, his principal motive to exertion is the fear of punishment, which comes to him in the shape of dismissal. It is true that he is not altogether destitute of other motives; habit, the desire of pleasing, and sometimes a hope of personal advantage, have their effect upon the day-labourer, and even to some extent upon the slave; but, as experience shows, such motives are feeble compared with that afforded by an interest in the concern in which a man is employed.

In Mr. J. S. Mill's very able work on Political Economy some remarkable instances are quoted of the effects of the application of this principle to various classes of workmen. The Cornish miners, it appears, 'are not only as a class intelligent for labourers, but men of considerable knowledge. The system on which the contracts are let gives the takers entire freedom to make arrangements among themselves; so that each man feels as a partner in his little firm, and that he meets his employers on nearly equal terms.' With this basis of intelligence and independence in their character, it is not surprising that a very great number of miners are now located in possessions of their own, leased for three lives or ninety-nine years, on which they have built houses, or that 281,541*l.* are deposited in savings-banks in Cornwall, whereof two-thirds are estimated to belong to miners.

Our limits forbid us to describe, after Mr. Mill, a very interesting experiment tried by M. Leclair, a master house-painter in Paris, about twenty years ago, the results of which are almost conclusive of the benefits both to employers and employed accruing from the granting to the latter a share in the profits of the concern. A similar mode of remuneration is adopted with  
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great success by the Chinese tradesmen in Manilla. We have tried this principle ourselves with most favourable results. The practice of sharing the profits of a concern with the workpeople has not been much followed in this country, owing perhaps to difficulties arising out of our laws of partnership; but in the South Sea whale-fishery, the Whitstable oyster-fishery, and some other trades, it is customary to remunerate the crews by shares in the profit of the voyages.

Where the undertaking is that of the men themselves the inducement to care and industry is still stronger than when they participate in the profits of an employer, supposing that the inherent difficulties can be overcome; and that this has been effected in many instances we will proceed to show.

Successful workmen's societies (*Associations Ouvrières*) were established in France earlier than in this country. The first was the Jewellers' Association, which began so early as 1834, and is still thriving. We visited their *atelier* in the past summer, and were much pleased with what we saw. The room in which the workmen were employed was airy, and fitted with apparatus for gas-brazing and other implements of the most convenient description. The men were singing at their work, and seemed happy and satisfied. They have accumulated a capital, and make fair profits, which are, at the end of the year, divided among them in proportion to earnings (piece-work), their wages being paid weekly.

The Revolution of 1848, which was made in great measure by the '*ouvriers*,' brought to the surface men who believed in the necessity of a 'reorganization of labour,' and the notorious *ateliers nationaux* were the result most known in this country. The unsoundness of the principles on which these establishments were based is, however, now admitted by nearly all; and even M. Louis Blanc disclaims ever having supported them; though the plan adopted by the Provisional Government, at his instance, was but one degree less objectionable, viz. the lending of public money to bodies of workmen who associated themselves for industrial enterprise, thus in effect levying taxes upon capitalists and setting up rival concerns with the proceeds. A large number of associations for the conduct of various branches of business were established at that time; but as their members had little bond of union, except the desire to be their own masters and to start in business with public money, most of them failed. Some, however, the earnest disposition of whose associates enabled them to make the requisite sacrifices, succeeded, and paid off their loans; but it has been observed that the most prosperous societies were those who never borrowed, forming,  
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like the Rochdale flannel-weavers, a capital out of the very squeezings of their poverty.

According to an interesting narrative in 'Good Words,' the Piano-makers' Association was founded by fourteen working men, without capital, without credit, and who were repelled in their application for a loan by the Commissioners of the Luxembourg. They managed to hire, in an out-of-the-way corner of Paris, a sort of loft, and transformed it into a workshop. Those who had tools brought them; the savings of a few others went to purchase more; some, who had no savings, sold their poor jewels, their furniture, their very linen. When all was put together, they found themselves in the possession of a sum of less than 9*l.* 4*s.* in cash. This was not enough; weekly subscriptions had to be paid from the earnings of those who were at work; while such as were out of employment pawned what they had, even to the very wedding-rings of their wives, to meet the contributions. They went without fire when it was cold, they gave up wine—almost a necessary of life to the Frenchman—they lived on dry bread whilst working like slaves, and had even the courage to make their children eat it. And so at last, penny by penny, privation by privation, they scraped together 40*l.* wherewith to buy materials and set to work. A timber-merchant was found who gave them credit; they worked for two months without a farthing of pay; made one piano, sold it; began another, then two, then four. On the 4th of May, 1849, they received their first moneys, which, after payment of debts, gave 5*s.* 3½*d.* for each member. Of this sum four shillings were set apart as wages; the balance was agreed to be spent in a frugal dinner, when the fourteen associates, their wives, and families met together to celebrate their first victory. For a long month yet, wages were only four shillings a week per head; but in June a baker offered to buy a piano for bread, and a bargain was struck for 19*l.* 4*s.* It was agreed that the bread should not be reckoned as wages, but that each member might eat to his need, and carry away for his wife and children. Meanwhile their excellent workmanship was attracting customers. By August the weekly wages arose to eight, twelve, and sixteen shillings a-week. Yet even these were not wholly paid out, the sum required for the purchase of first-rate materials being deducted from every Saturday's quota, while the workers received only a dividend of the balance in cash, with a credit for the remainder. By the end of 1850 they had thirty-two members, and a stock worth nearly 1600*l.*, on premises rented at 80*l.* a-year. In 1852 they divided into two separate associations, only one of which survives. We recently paid a visit to this concern, and found it in possession  
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of a large freehold manufactory, fitted with a steam-engine and every appliance of the most improved character. The pianos, as far as we could judge, were of very good quality both in tone and appearance, and the prices moderate. The capital of the Society has increased by accumulated profits to 6520*l.*, and the business done last year amounted to 8200*l.* The Piano Association has at present twenty-three members, and employs, in addition, twelve ordinary workmen.

As the associates of the societies founded after 1848 belonged, or were supposed to belong, to the Republican party, the stringent measures which attended the establishment of the Empire greatly affected them. A large proportion of the associations were forcibly dissolved by the Government, while of the remainder many were brought to an end through their most active members being exiled or deported; and thus nearly all in the provinces have disappeared. Upwards of twenty, however, still exist in Paris, which are all more or less flourishing; and the peaceable behaviour of their members has at length disarmed the hostility of the authorities, so that recently the Builders' Association has been employed to erect a hotel for one of the Ministers. This society is the largest and most flourishing in Paris. It began in 1848 without capital, but has now accumulated 10,000*l.* It employs the 81 members and also 225 *auxiliaries* (non-associates); and last year it did business to the extent of 52,000*l.* We conversed with the managers, who showed us some of their works. They were evidently men of great intelligence, and holding sound views on most economical subjects. The *Menuisiers en fauteuils* deserve notice for the great success of their operations. They have a large, airy *atelier*, fitted with most beautiful machinery; indeed, we were informed that there is no manufactory of this kind in France which has adopted mechanical aid to so great an extent. We carefully examined the goods, and found them to be of the best quality. This concern has an export trade to England.

The associations started with the economical fallacies so rife among workmen on both sides of the Channel, and which were brought into prominent notice by the recent strike among the London building operatives. At first the *ouvriers* objected to machinery and other labour-saving contrivances, and eschewed piece-work, paying equal wages to each member whether he accomplished much or little. Experience, however, soon disabused them of these prejudices, and now piece-work and machinery are adopted wherever applicable; wages are paid as much as possible

possible in proportion to the value of the labour, and profits are divided according to earnings. The rules of the workshops also, instead of being lax, are more strict than in the establishments of individual employers; yet cheerful obedience is paid to them, as the men feel their necessity to the general welfare. In some of the societies profits are divided between capital and labour, but generally interest only is allowed upon the former. Some decline to admit more members, and as the old ones die off the associations become small in numbers, employing many ordinary workmen, who receive merely wages as from a private master. This excites the indignation of the more democratic societies, who charge the others with becoming *bourgeois*, and with a desire to *exploiter* the operatives. (The remarks we made relative to the Rochdale Manufacturing Association will apply to this.) Still, however, there seems to be a greater leaning to Communism than in England. Thus an allowance of two francs daily is made to members during illness (the society so far performing the function of a sick-club), and when a member secedes without permission from the remainder, he is allowed usually to take out half only of his capital—originally, indeed, the rules did not permit any to be withdrawn, as the fund was considered sacred to the purposes of association. On death, a member's heirs are not entitled to succeed him, but his whole share of the capital is paid out to them.

The management of each society is entrusted to one or two *gérants*, assisted by a small elected committee which sits two or three times a week; and a general meeting of the members is held quarterly, half-yearly, or annually. As a public association cannot be instituted in France without permission from Government (which, under the Empire, would not—until recently, at any rate—have been granted), most of the societies have been formed as partnerships *en commandité*, and consequently appear under the style of private firms. They, however, govern themselves internally as above described.

Although the obstacles which have been placed in the way of workmen's associations in France have prevented the system from producing as yet any important effect on the condition of the labouring classes generally, they have, as Mr. J. S. Mill remarks, proved once and for ever that such undertakings can compete successfully with individual capitalists.

In Germany the co-operative movement has been confined chiefly to the small masters—of a grade similar to those previously described as existing in our own hardware districts—by whom the manufactures of that country are in great measure carried

carried on. These persons, finding themselves much pressed by the competition of capitalists, resorted to associations to enable them to hold their own.

As we learn from an interesting Paper by Professor Huber of Berlin, read at the Meeting of the Association for the Promotion of Social Science last year, besides the stores before mentioned, two sorts of co-operative concerns (*genossenschaften*) are established there, viz. *loan societies* and *raw material associations* (*roh-stoff-vereine*). The former are somewhat similar to the registered loan societies so numerous in England. The capital is formed by the contributions of the members, who in their turn borrow when they have need. Indeed the society may be called a co-operative bank, in which the shareholders are the customers. As in the English stores, the profits, after covering expenses and interest on capital, are divided among the customers (*i. e.* borrowers) in proportion to their dealings. These institutions, which now exist in all parts of Germany, are found very beneficial to their members by enabling them to obtain credit at reasonable interest,—7 or 8 per cent. per annum, instead of from 20 to 40 per cent., which they paid before for the small, short loans they need. In 1860, these societies numbered 31,603 members, with a working capital of 450,000*l.* With this capital the societies have put out as loans to the members nearly 1,275,000*l.* The expenses were 17,043*l.*, of which 6246*l.* were for management, and the remainder chiefly interest on capital. The losses have not been more than 223*l.*, which certainly speaks volumes for the honesty of the members and generally of the class to which they belong. As an example of the rapid growth of these societies, we would mention the parent Society of Delitzsch, which began business in 1850 with 177 members and a capital of 34*l.* 10*s.* 6*d.*; and in 1860 showed 453 members, with a capital of 3100*l.*, and business done 11,596*l.* The largest and one of the youngest of these establishments is that of Dresden, which opened in 1858, and now does a business of 188,489*l.* yearly.

The *rohstoffvereine* are associations of small manufacturers, tailors, shoemakers, and other handicraftsmen, for the purpose of purchasing raw materials, tools, &c., in an economical manner, and also in some instances for the sale of the members' produce. In a few of them the members are endeavouring to merge their individual undertakings into a co-operative enterprise. It seems that in 1860 the *rohstoffvereine* numbered about 150, of which 116 had in the aggregate nearly 7000 members, doing a business of 150,000*l.* Associations such as these might probably be introduced with advantage into this country.

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The co-operative movement seems to have advanced even faster in Germany than here. It began so recently as 1850, in the small towns of Delitzsch and Bitterfeld, in Prussian Saxony, the founder being Mr. Schulze, of Delitzsch, and this gentleman has been the most active director of the movement in Germany. The first society had not more than 200 members, with 300*l.* capital; while the credit associations numbered in August last 485, the *rohstoffvereine* 150, and the stores (*consumvereine*) and manufacturing associations nearly 100; the gross receipts last year amounted to 2,500,000*l.* A union of all the associations (*vereinstag*) meets yearly to discuss matters of common interest, and three newspapers are devoted to the movement.

It appears from an interesting letter to the 'Co-operator' (the well-conducted organ of the movement in England) of July last, from Mr. Miloradovitch of Tochernigor, that co-operative societies have long existed in Russia under the title of *Arteles*. Bodies of workmen in the towns form associations for messing together, and for carrying on various undertakings, such as cutting timber and bringing it to market, fishing, seal-hunting, &c. Pedlars are also usually united in *arteles*. These bodies are governed by a *starosta*, elected from among them. The discipline they impose upon themselves is strict: drunkenness and idleness being visited with fines and the national punishment—flogging!

About the year 1850 endeavours were made in London to establish workmen's associations in imitation of those of France. The movement was taken up by a body of philanthropists known as the 'Christian Socialists,' and several large societies of tailors, shoemakers, and other workmen were set on foot. The enterprise, however, was not successful, the associations having mostly disappeared or become mere private undertakings; and we fear that some of the amiable gentlemen who supplied the funds have sustained severe losses. One of these concerns—that of the Associated Shoemakers, in Tottenham Court Road—has for some years been going on well, the gentlemen who advanced the capital having received fair interest, while the profits have been divided among the workmen rateably in proportion to the wages earned by each. Such an undertaking may benefit the individuals employed, but it is not likely to be imitated, as persons of means will not invest where they have the risk of loss, and no hope of any return beyond the ordinary interest of money.

The Christian Socialist movement has, however, produced the negative good of showing certain proposed schemes for helping the poor to be impracticable, and in their working useful experience has been acquired

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The chief mistakes made in 1850 were those which have led to the ruin of many associations in France, viz. beginning with large numbers of members and starting with borrowed capital. No society of workmen can succeed without great determination, perseverance, frugality, and mutual confidence. Now these qualifications are never met with among a large body of men brought together by a vague expectation of bettering their condition. The only mode of founding a healthy association is for a few earnest men who thoroughly trust in each other to combine their small means and begin on a commensurate scale, from time to time increasing their numbers and their business as opportunity offers; following, indeed, the example of the Rochdale flannel weavers, and the founders of the now flourishing Parisian associations. A little society in London—the Gilders' Association of Red Lion-Square—adopted this excellent plan. The idea originated with the member to whom the management is now entrusted; he selected four associates—journeymen gilders like himself. Each contributed 2s. per week, until a capital of 8*l.* was realized, when a workshop was taken; after providing this with the requisite benches and fittings, the magnificent sum of 4*s.* 6*d.* remained as floating capital. Work being obtained from upholsterers and framemakers, operations began. The members received wages at the usual rates, and the profits were left to increase the capital. Although they took no credit, the society could not avoid sometimes giving it; and they sustained some losses, and at one time were a little in debt. This, however, has been long paid off, and they have now accumulated a surplus capital of about 200*l.* They have always managed to keep in steady work, which is not usual among gilders, and have, consequently, on the whole, received more in the shape of wages than they would have done as ordinary journeymen. No profits have as yet been paid out (except to one man who left the society); but five per cent. is credited upon the accumulated capital belonging to each member. It is intended that when there is a surplus profit after paying the interest, it shall be divided equally among the members. The workshop is roomy and commodious, and the men have a pleasant, respectable aspect. As—Londoner-like—they live at considerable distances from their work, they mess together in the workshop, one of the body officiating as cook. A friendly spirit prevails among them, and quarrels are unknown. There is no economical reason why societies like this should not be multiplied to any extent.

There are several working associations in the metropolis, but  
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as they are registered (if at all) as joint-stock companies, it would be difficult or impossible to obtain satisfactory statistics.

The same remark applies to the co-operative manufacturing concerns, into which channel the workmen's association movement in England has chiefly flowed. Their number, however, is very considerable. In Bury alone, three years ago, it was believed that as much as 600,000*l.* had been invested in this manner. The Inspectors of Factories at that time mention the numerous mills building and built by societies of working men, speaking highly of their management and obedience to the factory laws. In some of these establishments shopping, provided with machinery driven by the steam engine, is let to individuals, who work there with their families, thus reproducing the old system of domestic manufactures, but combining with it all the advantages of the most improved fittings and commodious work-rooms. All more or less resemble the manufacturing association of Rochdale; some give the workmen, as such, a share in the profits, but many appropriate the whole to the capital.

The cotton famine has subjected the soundness of these enterprises to a severe test, but they have generally stood it well. Few, we believe, have succumbed, while many have been able to continue working when most other mills had stopped; and if the members are wise enough to eschew speculation, and conduct their affairs as nearly as may be on ready money principles, there is every reason to expect that they will be permanently successful. Thus a class comes into being who, while remaining workpeople, must necessarily acquire much of the spirit and feelings of employers—and will consequently fill up the great gap between the two bodies.

The movement is eminently conservative in its tendency. Henri Quatre wished that every peasant in France could have a fowl in his pot. If every working man in England had a little property, a provision against misfortune and old age, a something to leave to his children, a stake in the country, in fact, becoming thus necessarily a supporter of order,—our institutions would be placed on so sound a basis that, humanly speaking, nothing could shake them.



- ART. V.—1. *Correspondence respecting Affairs in Japan*. Presented to Parliament in 1862 and 1863.
2. *The Capital of the Tycoon: a Narrative of a Three Years' Residence in Japan*. By Sir Rutherford Alcock, K.C.B., Her Majesty's Envoy and Minister Plenipotentiary in Japan. London, 1863.
3. *Narrative of the Earl of Elgin's Mission to China and Japan in the Years 1857, 1858, 1859*. London, 1859.
4. *Japanese Sketches*. By Captain Sherard Osborn. London, 1862.
5. *A Residence in Nagasaki and Hakodadi in 1859-1860*. By C. Pemberton Hodgson, late Her Majesty's Consul for those Ports. London, 1861.
6. *Ten Weeks in Japan*. By George Smith, D.D., Bishop of Victoria. London, 1861.
7. *Nippon and Pe-che-li; or, Two Years in Japan and Northern China*. By Edward Barrington Fonblanque. London, 1862.
8. *Yedo and Peking: a Narrative of a Journey to the Capitals of Japan and China, with Notices of the Natural Productions, Agriculture, Horticulture, and Trade of those Countries*. By Robert Fortune, Honorary Member of the Agricultural Society of India. With Map and Illustrations. London, 1863.
9. *Japan und China Reiseskizzen*. Von Dr. Hermann Maron. Berlin, 1863.

THE lamentable events which have recently occurred in Japan, and which threaten to involve her in hostilities with the nations which have of late years sought, though somewhat roughly, her friendship and alliance, may dispose our readers to regard with attention the social and political condition of that singular region. Our acquaintance with it has greatly increased; for within the last four years foreign ministers and consuls who fixed their residence in Yeddo and the ports opened under the provisions of the treaties, have been enabled to give much more detailed and correct descriptions of the country, its manners, social habits, institutions, government, and resources, than was possible before.

The Japanese claim an origin distinct from that of any of the races of the neighbouring continent. They repudiate any community or connexion with the Chinese, for whom they profess unbounded contempt. The Japanese language is in some respects unlike the Chinese, and, indeed, all other known languages, in its structure; but it seems now to be very generally acknowledged that the people were originally derived from the same Mongol stock, the descendants of which people China. The

peopling of Japan, however, must have been an event prior to the first Mongol invasion of China, for the features of the race differ considerably from the Chinese type. The civilisation of Japan has not been stagnant for ages, like that of China, but is quite distinct from that of any other Eastern nation, and indicates progress rather than immobility. There has been a gradual advancement in art and science; laws have been enacted in conformity with the wants of society; and the machinery of government has been brought to a perfection rarely exhibited even in a European State. Although in their mythology the Japanese, like some other Orientals, claim for their Sovereigns a direct intercourse with the Deity, they dwell complacently on the tradition that they were once only a community of humble fishermen, while they are indebted for their high civilisation to a heaven-descended lawgiver. They have derived nothing, they say, from other countries; but even at the present day, so far from disdaining their simple ancestors, it is the custom to send with all presents a small piece of dried fish, that their origin may be kept in perpetual remembrance. Society in Japan, left to its own development, probably at first assumed the tribal form, and may at one period have been not unlike that of New Zealand, where numerous chiefs long divided the country among them. The Japanese fix the date of the foundation of their monarchy at 660 B.C., when the government became theocratical. How a theocracy was first established it is impossible to discover, but it certainly subsisted as the dominant power for centuries, and it exists in a modified form to the present day. According to Japanese history the principalities into which the country was divided had but little connexion with each other. Japan is said to have contained at one period sixty-six separate provinces or petty kingdoms, which were afterwards subdivided into six hundred, each governed by a local chief. Under such a form of government the normal condition of society must have been one of war, such as we know it to be among the savage and semi-civilised tribes of Africa. Some more powerful chief obtained at length an ascendancy over the rest, and, by craft or superstition, established a spiritual empire. But this potentate—the Mikado, as he was termed—found himself unequal to the task of preserving order among the turbulent chiefs who had acquiesced in his pretensions; and he accordingly took a step which, however it may have conduced to his peace, proved fatal to his authority. He delegated the power of the sword to one of the ablest of his generals, who had in reality become his master. The result was the complete pacification of Japan, and the transformation of a successful

cessful commander into the great officer of State termed the Tycoon. The Spiritual Emperor remained the supreme head of the Church, the fountain of honour, the high-priest of the nation, the defender of the faith; but the government of the army, the control of the finances, and the regulation of the external relations of the empire were vested in the Tycoon.

The political attributes of this great functionary have been often misconceived. He is frequently styled the temporal, as contrasted with the spiritual Emperor. The Japanese acknowledge but one Emperor, namely, the Mikado. The term Emperor, as applied to the Tycoon, is one to which the Japanese strongly object, although they do not deny that in him the temporal power is constitutionally lodged. His title is not always the same. In peace he is called the Tycoon; on the breaking out of war he assumes the title of the Ziogoon. Whether this change of name is connected with any great addition to his authority we have been unable to ascertain; but it is not improbable that it may imply a temporary dictatorship, called into existence by the necessity of strengthening the executive power, on the occasion of any great public danger or national crisis.

The Mikado combines the dignity of a Sovereign with the infallibility of a Pope, and his spiritual councillors may be compared to a College of Cardinals. He has no army, however, to consume his revenues and to coerce his flock. The expenses of his Court are defrayed from the resources of a small principality, and from emoluments derived from indulgences,\* benevolences, and fees. He canonizes great and holy men after death; decides, without appeal, all theological questions, and issues irrevocable 'bulls.' Shrouded in mystery, and seen by no mortal eyes but by those of his wives or occasionally by the Tycoon, many extravagant stories obtained currency respecting his peculiar establishment and mode of life. It was said that the Japanese not only revered him as a god, but considered themselves as unworthy to approach him even in thought. The great Solar Goddess was believed to be incarnate in his person. He passed, it was said, a certain number of hours every day seated on his throne in a state of perfect immobility, whereby the stability of the Japanese empire was maintained and its peace insured. He was pronounced too holy to be allowed to touch the ground with his feet. His hair, beard, and nails were cut only while he was asleep; and no article of dress, and no utensil to which he had once imparted a sanctity, could ever be used again. He was supposed never to die, but to dis-

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\* Indulgences are sold at Miaco, as they once were in Rome.

appear; and his successor was enthroned before the apotheosis was announced. We cannot undertake to say how much of this representation is true. The Japanese themselves profess to know little about their Spiritual Emperor or his mode of life. We suspect it to be much more sublunary than spiritual, and that the attributes with which he is supposed to be invested do not disqualify him for discussing the interests of his kingdom and enjoying the pleasures of earth.

The relations between this great spiritual Potentate and the Tycoon are said to be very delicate, and often somewhat embarrassing. The hereditary Temporal Governor of Japan formerly paid an annual visit of ceremony to the Mikado, but it is now paid only once in seven years. Embassies and presents are now resorted to as substitutes for journeys which occupied an inconvenient portion of the Tycoon's time. There is an antagonism between these two powers which reveals itself even to the people. The Tycoon and the Mikado, who conjointly rule the Empire of Japan, are not always on the best of terms with each other, and they have their respective parties in the State. One of our consuls observed that caricatures of the Tycoon were freely exhibited in the shop-windows and on the walls of Miaco, while at Yeddo equal liberties were taken with the Mikado; and the pictorial representations at both places seemed to afford as much entertainment to the populace as 'Punch' and 'Charivari' do in London and Paris.

Much misconception exists respecting the nature of the Tycoon's authority; indeed, the system of the Japanese government is very little understood even by the Ministers of the foreign Powers who have been brought most frequently into contact with the high functionaries of State. These officers, when questioned respecting the constitutional limits of the Tycoon's power, have generally either answered evasively or purposely deceived their inquirers. There is, it is certain, but one Emperor of Japan, namely, the Mikado. The Tycoon is only the Lord Lieutenant or Vicegerent of the kingdom and hereditary Commander-in-Chief. He is not possessed of any of the attributes of sovereignty except within the five imperial or reserved provinces which constitute his own domains. In the treaties conceding permission to Europeans to trade, he could only declare those ports open which were situated within his own territory; and the foreign ministers were repeatedly informed that the Tycoon might be constitutionally resisted if he ventured to order ports belonging to any of the great Daimios to be opened against their will. In the embassy despatched from Japan to Rome in the year 1577, the envoys were not the  
representatives

representatives either of the Mikado or of the Tycoon, but of the three independent princes of Bongo, Arima, and Oruma. There are clear indications that the Tycoon has been gradually deprived by the nobles of much of his originally usurped authority, and the Government is practically a powerful oligarchy under an Imperial head. The power of the State has for a considerable period been concentrated in a council of independent princes. The first military usurper Taiko Sama ruled Japan, while Tycoon, during his life as one State; but the numerous princes must have gradually regained a considerable portion of their original independence. Of the two hundred and sixty-four Daimios, the greater number exercise the power of petty princes in their respective domains ('for the transgressions of a land many are the princes thereof!'); they possess the power of inflicting capital punishment, and owe only a nominal allegiance even to the Mikado. Eighteen are virtually independent sovereigns, who, if united, can direct the policy and councils of the Tycoon. Japan, therefore, seems to have nearly reverted to its early political condition, and the national unity is maintained by a phantom Emperor who possesses little practical control over the policy of the State. The Government is, in short, a confederation of independent princes; and the sovereign power—although nominally vested conjointly in the Mikado and the Tycoon—is really lodged in a great Council of State consisting of five great Daimios, and in a subordinate council appointed for the arrangement of administrative details. It does not appear to be ascertained whether the members of the Tycoon's Cabinet are chosen by himself, or whether he is obliged to accept nominees of the great Daimios as his councillors. Japan, therefore, is now practically ruled by an aristocracy of two hundred and sixty-four hereditary Daimios, or territorial princes, represented by a council which dictates the policy of the Tycoon. These nobles derive their immense power from long-established privileges, great territorial possessions, and recognised hereditary right. The seat of this oligarchical government is Yeddo.

It is an error common to most of the writers on Japan to describe the political state of that country as being an exact counterpart of the feudalism of the Middle Ages. In many of its external aspects it does certainly resemble it; but feudality, in the strict sense of the term, can scarcely be said to exist in Japan. The armed retinues, armorial bearings, and lofty pretensions of the great princes, naturally carry the imagination back to the age of the Barons of Europe; but there is no trace in the history of Japan of any political cause which could have given rise to such an institution as feudalism. Japan frequently

frequently entered upon wars of aggression upon the neighbouring mainland under the direction of its powerful chiefs. The Corea was thus conquered and held for a time in subjection. The fleets of Japan ravaged the coasts of China; a band of Japanese even became the body-guard of a foreign prince in the Island of Luzon, and acquired an authority not unlike that of the Prætorian Guards in Rome or of the Mamelukes in Egypt.\* The estates of the great Daimios are not fiefs held of the Mikado by burdensome duties and services, but are essentially independent principalities. The troops raised by the Daimios form independent armies, and they are maintained out of the revenues of the territories to which they belong, although, in the event of foreign war, a contingent from the principality of every Daimio would doubtless take the field for the general defence of the empire. The Prince of Kanga is said to possess not less than 40,000 men-at-arms, a great portion of whom were, until lately, quartered for half the year in Yeddo. Although some of the nobles may hold their estates direct from the Emperor, the great Daimios were never invested, either by the Mikado or by the Tycoon, with their principalities. These princes recognise the spiritual supremacy of the Mikado and the constitutional authority of the Tycoon; but the tribute they pay is almost nominal, and is chiefly in the form of presents, which are acknowledged simply as complimentary and are returned. It has been the policy of successive Tycoons, when possessed of sufficient power, to partition the territories of these princes, and thus weaken their influence in the state. Out of the sixty-eight original territorial sovereignties, only eighteen now remain undivided. By what precise means this disintegration of great masses of landed property was brought about in Japan we know not, but it must have given rise to frequent contests between the Tycoons and the Daimios, and a struggle has doubtless long existed in Japan between the principles of centralisation and of provincial independence. Some of these princes are more powerful than the sovereign of a moderate German state. The Prince of Satsuma, the second grandee of the empire, rules his dominions as an absolute sovereign. Until recently no Japanese belonging to another province was permitted to enter that territory; and there is a tradition that a former Prince of Satsuma threatened that even if the Tycoon himself should dare to present himself in his principality uninvited, he would order him to be decapitated for the offence.

The working of a double government like that of Japan gives

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\* Sir John Bowring's 'History of Siam.'

rise to an immense amount of suspicion and mistrust; the Mikado and the Tycoon are, in effect, rival powers. The Mikado has his spies in the court of the Tycoon; and the emissaries of the Tycoon swarm in the capital of the Mikado. The interests and views of these two personages seem far from being identical: the Mikado and his court represent the traditional restrictive policy of the empire, while the Tycoon is supposed to incline to a more liberal policy in favour of progress and trade. There is a section—although perhaps a small one—of the aristocracy which also advocates progress, and is desirous that the country should be thrown open to foreigners. The party which was opposed to the conclusion of the treaties maintains that the assent of the Spiritual Emperor is absolutely necessary to the validity of any engagement with a foreign Power, and this assent, they say, has never been given.

In any great national contest involving a fundamental change in the policy of the State, one party in Japan would probably strive to restore the Mikado to his original authority, while the other might endeavour to build a new political fabric on the ruin of the ancient theocracy. The regal Government, as it is now constituted, is hopelessly effete, and seems to be used chiefly as a political instrument by the ambitious Daimios and the priesthood. Of all the anomalies which are found in this extraordinary country, one of the greatest consists in the social restrictions which have been long acquiesced in by the nobles, although they have constituted, in effect, the ruling power of the state. Notwithstanding their vast possessions and overwhelming political influence, they have submitted for centuries to the most galling and humiliating limitations of their freedom. For six months of the year these great princes were compelled to reside at Yeddo, and, on leaving the capital for their estates, they left their wives and families as hostages for their loyalty. Im-mured for one half of his life in his provincial castle, cut off from all social intercourse with his equals, a Japanese noble passed his time amidst his armed dependents, revelling in the licentiousness and epicurism of a Sardanapalus, and surrounded only by flatterers and slaves. In conformity with state precautions and the rules of a conventional etiquette, only blood relations are permitted to associate with each other. If one Daimio should visit another, it would be a recognition of his superiority; pride, therefore, alone keeps them apart. These unhappy noblemen find no resource in the improvement of their estates, nor are they addicted to field sports. Habits of intoxication, originating in seclusion and want of occupation, are said to be prevalent, and other vicious indulgences are freely resorted to for relieving  
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the insufferable tedium of a life passed without society, without recognised duties, and without any healthy moral excitements. Even in these lonely retreats the curse of Japanese life haunts the palace of the Daimio. He is surrounded by spies, and his enemies are those of his own household. He may be denounced to the Tycoon for a hasty comment, an equivocal expression, or an unguarded jest; and a sudden summons to the capital may determine him to anticipate disgrace by suicide. The spirit of suspicion, by which the government of the Tycoon is rendered almost omniscient for every bad purpose, brings into existence myriads of spies, who engender universal distrust and scatter the seed of conspiracies and false accusations broadcast over the land. The misery of such a state of existence, in which life is rendered one scene of constant restraint, has encouraged among the nobility the practice of early abdication, for a reigning prince of advanced age is rarely seen in Japan; he either resigns his oppressive dignity to his son, or dies prematurely of grief or *ennui*.

No European has yet seen the interior of a Daimio's castle. The treaty right to travel freely throughout the empire has been practically annulled by being confined to the Tokado, or great thoroughfare of the country, which alone is under imperial control. In the journey undertaken by Sir Rutherford Alcock, the Daimios disputed his right to turn a single step out of the high road, and in many of the towns in which he halted, barriers with curtains bearing the Daimios' coats of arms were raised, not only for the purpose of preventing his passage, but of shutting out even the view of the streets branching from the great thoroughfare. In all the places which contained a Daimio's residence the side streets were barricaded. A nobleman's château or castle in Japan is surrounded by a moat and a wall, and the wall is generally provided with parapets and loopholed for musketry. If the owner is a Daimio of high degree, his castle wall is often flanked with turrets. The grounds are occasionally decorated with pagodas rising above clumps of trees with which the parks are always richly ornamented. As the nobles are the sole landed proprietors, the people have no interest in the soil but as tenants and cultivators. It has been said that seven-tenths of the produce of the land goes to the lord; but that in the domains of the Tycoon only six-tenths of the produce is demanded. The subject of the tenure of land in Japan is involved in much obscurity. Rent has been paid from the remotest times in produce, and the lord's revenue is estimated in piculs of rice. The produce is applied to the maintenance of large bodies of retainers, who wear the uniform of their lords with embroidered  
coats



coats of arms, are well mounted, clad in chain armour, and armed with lances.

It is sufficient to glance at the statement of the revenues of the great territorial princes of Japan\* to recognise the fact that a nobility possessed of such enormous wealth must necessarily constitute the governing power of the State. The revenue of the Prince of Kanga, converted into sterling money, is estimated at 768,728*l.*; the revenue of the Prince of Satsuma at 486,921*l.*; of the Prince of Owari at 402,886*l.*; of the Prince of Mōtsū at 400,640*l.*; and the revenues of the other Daimios range from 400,000*l.* to 6000*l.* a year: only a few possess revenues less than 20,000*l.* a year. The members of the Gorōgō, or the Tycoon's ministry, are not among the richest of the aristocracy, and they are probably appointed, not by reason of their commanding position in the country, but as the deputies or agents of the great princes, to whom, rather than to the Tycoon, they are really responsible. The salaries of some of the executive officers of the Government are small, when judged by an European standard. The Governor of Finance, or the Japanese Chancellor of the Exchequer, receives only 960*l.* a year; it may be presumed, therefore, that his duties are not of a very onerous description. The Governor of the city of Yeddo, which contains a population of more than 200,000, receives the moderate salary of 1920*l.*; the Governor, or, as we should call him in England, the chief Commissioner of Public Works, is paid the moderate salary of 960*l.*; the Governors of the Navy, or the Lords of the Japanese Admiralty, are put off with the pitiful salary of 38*l.* each, less than the wages of a first-rate British seaman—conclusively shewing the very low estimation in which the profession is held by the Japanese, notwithstanding the recent introduction of war-steamers into the navy. The Registrar of the Daimios' Banners is paid in proportion to the estimation in which heraldry is held in Japan; he receives 2500*l.* a year. The Commander-in-chief of the Imperial Guard is paid 3200*l.* a year; Generals of troops armed with lances, 1152*l.* a year; Generals of troops armed with swords only, 320*l.*; but the importance which the Government attaches to the arm which is to place its troops on an equality with Europeans in the field, is shewn by the appointment of two Generals of Musketeers, with salaries of 5760*l.* each. A school of musketry was established in 1860, and an Inspector-General appointed with a salary of 3200*l.* a year. Although the Japanese have been represented as a stationary people, it is evident that they are alive to the importance of

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\* Parliamentary Paper.

placing themselves, at least in respect of improved firearms, on a level with the nations of Europe.

No Asiatic nation has attained so high a degree of material civilisation as the Japanese, and it is astonishing how little they have, until quite recently, been indebted to Europe for the progress which they have made. Their swords and cutlery are of finer temper than any which Birmingham or Sheffield produce, their silk manufactures are admirable, their landscape gardening is distinguished for its taste, and they are no mean proficient in the arts of design. The great roads of the country are shaded with magnificent trees, and are constructed with as much skill and care as the best highways of Europe. Architecture is not much cultivated, but the earthquakes to which the country is subject make that science, at least in its higher branches, altogether useless. Whatever may be the moral defects of the Japanese people they have a very short code of laws which possesses the rare merit of being simple and intelligible. On the issue of every new edict the magistrates assemble the people and proclaim the will of the Emperor in their presence. The law is then posted in the public halls or places appointed for the purpose in every village, town, and city of the empire. The Japanese are said to highly approve the concise terms of these edicts, and never for a moment to question their propriety. The judicial administration has been highly praised, and competent observers bear witness to the decorum with which trials are conducted. There is scarcely any graduated scale of punishment; almost all crimes are punished alike. There is but one recognised offence—that against the law—and the penalty is death. The severity of this Draconian code has almost annihilated crime, and its simplicity relieves the Government from the solution of many social problems which perplex European philanthropists. It needs no reformatories, penitentiaries, or model prisons, and the security of property is not endangered by the presence of liberated convicts. They have no lawyers, nor (strange to say!) do they appear to need any. A certain fear of disgrace is universal; but suicide purges all stains from the character, for death has no terrors for a Japanese. Manners have acquired a high degree of refinement, and when it is considered how much of the comfort of life depends on the demeanour of those about us this is certainly no slight merit in any people. Even the humblest classes exhibit a studied politeness. The relation between the sexes differs from that of most Oriental countries. The position of woman is well-defined and natural. She is not the slave but the counsellor of her husband; she assists him in his business; her sphere is the house, and her duty the education

education of her children. There are no 'strong-minded women,' in Japan, remarks with satisfaction an accomplished Prussian traveller; all are joyous girls or amiable wives. There are peculiarities in the marriage rite which shew that they attach a high importance to this connexion. It is not exactly a religious ceremony, for marriage in Japan is regarded as a civil contract; but the celebration of the nuptials takes place in a temple and in the presence of a priest. The bride, at the conclusion of the ceremony, kindles a torch from the altar, and the bridegroom kindles another from hers. The sanctity of the matrimonial relation is beautifully typified in this symbolic rite, and the conduct of women after marriage is allowed by all to be pure, although it must be admitted that the penalty for infidelity is death; but the national custom of blackening the teeth and pulling out the eyebrows is calculated, and probably intended, to repel all further advances. Women in Japan, however, are not free from the universal weakness of the sex. The family of the Governor of Hakodadi and the British Consul were on visiting terms, and the first request of the Japanese lady on entering the drawing-room of her hostess was to be allowed to inspect her wardrobe, in the examination of which she occupied two hours, trying Parisian bonnets and putting English dresses on over her own.

It was long thought that Japan was as densely peopled as China, and that there was the same pressure of population on the means of subsistence. A more extended acquaintance with the country has not confirmed these impressions. In the journeys which the ministers and consuls have made into the interior it was found in many parts sparsely peopled, and the land not in general cultivation. Extensive districts were observed in a state of nature and covered with brushwood. The cities and the coast are densely peopled, but the interior of the principal island, Nippon, is unknown even to the natives, and is said to be occupied only by bears and deer.\*

The mineral riches of Japan have been long suspected to be great; but recent travellers have been most impressed by the magnificence of its flora and the inexhaustible fertility of the soil. The Japanese are a nation of gardeners. Every cottage has its cultivated plot, and the poorest family in the most crowded city grows a few flowers, or perhaps indulges a taste for Nature in the construction of a minute artificial cascade crowned with hanging rocks and diminutive trees. One of the greatest, and certainly the most innocent of the enjoyments of a Japanese

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\* Mr. Hodgson's 'Residence in Nagasaki.'

noble in his solitary grandeur consists in the superintendence of his magnificent gardens. Rare plants are brought from all parts of the empire at a fabulous cost, and disposed in a manner to gratify that taste for colour and form which is innate in every Japanese. This universal appreciation of Nature and its exquisite productions finds an expression even in the laws. No fir or cypress-tree can be cut down without the permission of a magistrate, and for every full-grown tree that is felled a sapling must be planted. Every botanist and amateur gardener knows that we are indebted to Japan for some of our most beautiful flowering shrubs.\*

The scenery of Japan is worthy of its flora, and we shall leave it to Sir Rutherford Alcock, who possesses a keen appreciation of this beautiful country—although the enjoyment of its charms must have been sadly impaired by his incessant anxieties and a constant sense of insecurity—to describe in a few words its principal features:—

‘Such fertility of soil, fine growth of ornamental timber, richness and variety of foliage, or such perfection of care and neatness in the hedge rows and shady lanes, the gardens, and the numerous pleasure grounds of the temples, are not, I believe, to be found anywhere out of England. The brilliant green hues and freshness of the grass and every kind of foliage rather betokens a damp climate, but the mixture of tropical vegetation, and with endless succession of ever-green trees, and the hardier race of pines and conifers of great variety, gives a character to the whole scenery of the country as novel as it is perfect in effect. The tree fern, which looks like a palm in its tufts of top foliage and bare trunk, the bamboo, banana, and palm, side by side with the pine, the oak, and the beech, with a numerous race of timber trees and shrubs, some of which are probably unknown in Europe, open a wide field for the botanist, and give studies for the landscape painter of unrivalled beauty. There is an infinite

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\* Mr. Fortune, a gentleman well known for his botanical explorations in China and amongst the Himalaya, was induced to devote some time to the investigation of the flora of Japan, and the result has been not only the production of an interesting volume on the country, but the importation of a number of new flowering plants which will greatly enrich our shrubberies and gardens. Among the new varieties of evergreens, Mr. Fortune discovered and has brought to this country a beautiful new species of *Aucuba*, which if it should succeed in our climate will become a great favourite. It is not variegated like the common shrub of our English gardens, but possesses leaves of the deepest and most glossy green, and bears a profusion of large crimson berries, which continuing on the shrub during winter, will greatly add to the appearance of our gardens in that dreary season. The plant most remarkable for its beauty, and which Mr. Fortune has also introduced, is a new primrose. Its flowers are of a rich Magenta colour, and are arranged one above another on a spike nearly two feet in height; it is, Mr. Fortune says, the most beautiful species of the genus to which it belongs, and will well merit the title of the “Queen of the Primroses.”

variety of form, character, and colouring in the masses of foliage that everywhere meet the eye, grouped in the midst of well-kept fields and verdant slopes which any English gentleman might envy for his park.'

The enjoyment of this exquisite scenery must be much diminished by a sense of its precariousness, for in Japan if the fair face of Nature displays a perpetual smile, it but conceals the fierce discord within. No country has been so extensively or so frequently desolated by earthquakes. The normal state of Japan may be considered as one of chronic convulsion, 'the ever smoking and heaving volcanos being in full blast throughout the land.' The earthquake by which Yeddo was almost destroyed in 1783 exceeded in horror and desolation even the great earthquake of Lisbon. The shocks lasted twelve days, one of the loftiest mountains in the country was rent asunder, and vast chasms opened in the earth, into which thousands of the terrified inhabitants rushed in their headlong flight. Twenty-seven neighbouring towns and villages were totally destroyed; boiling rivers overflowed their banks, and at least 180,000 people are said to have perished. Another great convulsion of nature occurred as recently as 1854, in which the loss of life at Yeddo alone was estimated at 200,000 souls. In 1860 twenty-five shocks, some very severe ones, were felt in the course of the year. Familiarity with these awful phenomena does not reconcile the Japanese to them, and they are said to be haunted by the fear that their beautiful islands will some day totally disappear. Fusyana, the Sacred Mountain of Japan, has not been in eruption for more than a century, which accounts for the frequency and violence of the earthquakes to which Yeddo and its neighbourhood are subject.

For centuries a desire has been manifested by Europeans for intercourse with Japan. It has been regarded as the very Garden of the Eastern Seas, and a Paradise 'wherein grew every tree that was pleasant to the eye and good for the food of man; wherein, moreover, there was gold, and the gold of the land was good, together also with the bdellium and the onyx stone.' Such glimpses as the Portuguese and the Dutch were permitted to obtain of the interior of the country more than realised these visions of fertility and beauty, and excited their unbounded enthusiasm.

In an earlier period of their history the Japanese were addicted to commerce, and they are said to have traded with sixteen different countries. They entered into a commercial treaty with England in 1613, and granted valuable privileges to its merchants. All the ports of the empire were opened to British ships; British subjects were allowed unrestricted intercourse with the  
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people; were permitted to build houses wherever they thought proper, and were exempt from the jurisdiction of the Japanese courts. These concessions were suddenly withdrawn, and British ships were restricted, as the Dutch afterwards were, to a single port. This measure seems to have been only one of precaution and police, for all the more important stipulations of the treaty were strictly fulfilled. The trade between England and Japan must have been injudiciously managed; for we find that, although in the hands of the East India Company, it was abandoned as unprofitable in 1623.\* The massacre of native Christians some years after the East India Company relinquished its connexion with Japan, originated in political jealousy, not in religious hostility. It was a proscription rather than a persecution. The Japanese Government had previously been a very tolerant one. The Tycoon on being asked whether the new religion which had been introduced by the foreigners might be propagated in the empire, replied by inquiring how many sects it already contained, and on being informed that there were thirty-five, he said that one more could be of no consequence. Christianity, as a religion, had nothing to fear from the Government of Japan, which probably thought that all religions were equally true and equally useful. The opposition that it encountered first came from the native bonzes; but it may be presumed from the sceptical character of the Government that it paid little attention to the complaints of the priesthood. The dogmas of a pure Christianity would never have provoked the hostility of the Government. Christianity was unfortunately presented to the Japanese associated with the claim of the Pope to the spiritual and temporal allegiance of all its professors. Several of the great Daimios accepted this theory with its political consequences. The theocratical Government of Japan could not be expected to tolerate a religion which taught the people not that the Mikado, but the Pope of Rome was their spiritual sovereign; and the Tycoon was as little disposed to acquiesce in political assumptions against the consequences of which even the great potentates of Europe had often been compelled to take precautions. The Jesuits claimed for the Pope the very attributes with which the Mikado was invested by the popular belief as the representative of the Divinity upon earth. This was the real cause of the expulsion of Christian missionaries from Japan, and of the terrible punishments which were inflicted on the native converts. They were put to death for sedition, not for dissent, and the rigour of Japanese law admitted of no alternative. Chris-

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\* Rundall's 'Memoirs of the Empire of Japan.'

tianity has unfortunately been hitherto identified by the Japanese Government with politics; and the missionaries of all creeds are still regarded with equal suspicion, for Christianity in Japan is synonymous with rebellion. In consequence of its association with politics Christianity was driven from the country, but it has left traces of its former influence upon the people. Secret avowals have from time to time been made by natives to the members of the British consulates and legations of a belief in Christianity, but its profession is rigorously proscribed. The Bishop of Victoria was told by a foreign resident fully competent from his opportunities of observation to authenticate the statement, that in a part of the city of Yeddo there are now in existence a hundred families congregated in one spot and dwelling by themselves, the descendants of native Christians, who, during the sanguinary severity of the persecution waged by Tyco-sama and his successor, had renounced the Christian faith, and whose lives were spared on condition that they and their posterity should continue to cultivate a knowledge of the abjured religion, in order to qualify themselves to act in every age as a body of religious detectives and inquisitors for discovering and destroying the hated sect. Supported by the Mikado, and relieved from all labour, they form a separate body and receive daily rations of rice from the Government. The old laws against Christianity still exist in full force, and the machinery of a religious inquisitorship is thus ready to be called again into action. 'It would be a strange but not impossible result,' however, truly says the Bishop of Victoria, 'if under a more favourable condition of society an instrumentality originally designed for the extermination of the Christian faith should be converted by the providence of God into an agency for diffusing the true light of the Gospel throughout the Japanese empire.'\* From the time of the extirpation of Christianity a law has been in force declaring that 'so long as the sun shall shine no foreigner shall touch the soil of Japan and live.' This law is still in force. It would, Sir Rutherford Alcock thinks, have been of no avail to have introduced a clause of toleration for the Christian religion in the treaties with the different powers, since the Japanese Government still asserts its right and duty to put to death any native who shall listen to a missionary or even accept his books. A native teacher or interpreter who inadvertently took up and opened a Japanese translation of St. Luke's Gospel in the presence of the Bishop of Victoria, imme-

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\* Bishop of Victoria's 'Ten Weeks in Japan.'

diately closed the book and laid it down again in the greatest alarm.

The political isolation of Japan was not established before the middle of the seventeenth century, but it never separated itself completely from the commerce of Europe. A small Dutch factory was permitted to remain at Desima, where two ships annually arrived from Holland, and returned freighted with the produce of Japan.

Russian and British ships touched at intervals, and under various pretences, at the ports, but they were invariably ordered away, and compelled often to make a precipitate retreat. The Dutch submitted for two centuries, for the sake of its copper and gold, to humiliations such as no other people would have endured, and they were tolerated only for the sake of the few articles which Japan desired from Europe. They even renounced the distinctive symbols and outward profession of Christianity; for, finding that in Japan they could not serve God and Mammon, they preferred the service of Mammon to the service of God.

The United States of America was the first Power to open a renewed intercourse with Japan. The treaty concluded by the United States Minister with the Tycoon's Government in 1854 attracted the immediate attention of Europe, and led to similar treaties between Japan and the great European powers. Very grave considerations are suggested by the spectacle of this enforced enrolment of Japan in the great community of nations; an act which we trust may be beneficial to Japan in the long run, as well as to ourselves; but involving serious moral responsibilities, which we are glad that England was not the first to undertake. The Government of this country did not view with indifference a great commercial and naval Power forming treaty relations with Japan, situated within a few days' sail of China, in the trade of which we possess so immense a stake. It thought that our interests demanded that we should participate in the what they might be, of opening to commerce a country; and that if Great Britain would certainly step in and demand so, that influences injurious to spring up in the Eastern Seas."

#### Negotiations

even the coast of China and Manchouria for the development of her naval power in the Japanese Islands present the greatest temptation



Negotiations were accordingly opened with the Japanese Government by the Earl of Elgin for the conclusion of a commercial treaty and they were brought to a termination in 1858. There can be no doubt that the treaty was unwillingly agreed to; but we learn that all the great Daimios had been consulted before the American treaty was signed, and that a majority consented to it as an experiment. The treaties appear at first to have given satisfaction; and the propriety of throwing open Japan completely to foreign trade is said to have been frequently discussed in council. A reaction, however, appears soon to have set in. The great Daimios unanimously came to the conclusion that the existing order of things would not long survive the shock of so great a social revolution as must be the inevitable result of foreign intercourse. They appear to have determined upon a rupture with the Treaty Powers, and the preparations for eventual hostilities were too public to escape the notice of the foreign ministers. Our Government has been more than once informed of these preparations; and there is reason to think that the least violent and reactionary of the Japanese statesmen were put into office to maintain temporary friendly relations between the Government and foreign powers, but with the secret understanding that they were to adopt a line of conduct which would render the treaties virtually inoperative.\* The nobles as a body recognise in foreign trade no sufficient equivalent for the dangers to which their political supremacy would be exposed. They are already wealthy beyond their utmost wishes, and they have no desire to raise up a commercial class to vie with them in ostentation, and eventually perhaps supplant them in public estimation. Japan, they have been heard to say, already possesses everything which it can desire. With every reason to be content with their own position, it is but natural that the ruling class should have viewed with dissatisfaction the admission of foreigners who might unsettle the minds of the people, indoctrinate them with new ideas, and inspire them with a political ambition from which they had hitherto been free. For the Japanese, notwithstanding the fixedness of their political institutions, are a highly intellectual, acute, and reasoning people. There is among them, Mr. Oliphant says, absolutely a rage for every description of knowledge. A Japanese is full of eager interest and curiosity, and is inspired with a passionate desire to

tion to her ambition. In 1860 she even formed something like the beginning of a settlement on the island of Tsushima, a small Japanese dependency, possessing a fine harbour; but on a visit from the English admiral in 1861, the Russian authorities were convinced of the impropriety and illegality of the proceeding, and quitted the place.

\* 'Three Years in Japan,' p. 213.

learn. There does not exist a more ingenious and industrious people, or one more desirous of adopting new inventions or improvements. They had acquired the rudiments of science, and were versed in some of the arts, at a time when Europe was in a state of comparative barbarism. They constructed, from drawings alone, a steam-engine, before one had been seen by themselves; and they are now able to turn out from their factory railway locomotives and marine steam-engines which would do no discredit to a European establishment. They already possess a short railway. Japanese captains command Government war steamers, and the machinery is superintended by native engineers. They understand, and are making available, the electric telegraph. They construct telescopes, barometers, thermometers, and theodolites. Their hydrographical attainments are remarkable; their charts are rightly triangulated and always most correct, and unrivalled for their accuracy of drawing and their neatness. They are well versed in astronomy, and we have heard that there exists a Japanese translation of Laplace's '*Mécanique Celeste*.' They imitate Chubb's locks so well that their productions cannot be distinguished from the real. They turn out excellent glass from their manufactories; and Sir Rutherford Alcock found one establishment making moderator lamps. Nasmyth's hammer is in full operation at a great foundry, and the diving-bell is in common use. The Prince of Satsuma possesses an extensive arsenal, in which eight hundred workmen are constantly employed.

Notwithstanding the dark clouds by which the horizon is at present obscured, the results of the treaty which opened the ports to foreign trade have been such as to afford much encouragement for the future: but great alterations must take place in the political and social economy of the empire before it can yield those great supplies for foreign markets of which it is undoubtedly capable. There are several powerful causes in operation, which, for the present at least, restrict the ability of Japan to consume European commodities. There is a stringent sumptuary code, which limits expenditure among all classes of the population; and there prevails generally among the higher orders a profound contempt for commerce and commercial men which has embodied itself in the national customs and institutions. A millionaire merchant (if one exists in Japan) is obliged to prostrate himself in the dust before the lowest two-sworded retainer of a Daimio, if he happens to meet one on the road. Wealth bestows no social position. The most prosperous trader dares not appear on horseback in the streets of Yeddo; if he did, he would be instantly dragged from the saddle and ignominiously rolled in the mud. Nowhere has the line between trade and privileged

privileged rank been more rigidly and sharply defined. The merchant has his place in society, but it is a very low one; and if he should accumulate wealth, it would, in the present constitution of society, be of little value either to himself or to his children. It has been ascertained that there is a party in the country which would rejoice in extended commercial relations between Europe and Japan. Some of the smaller Daimios, although, like the old feudal nobility of Europe, they profess to hold trade in contempt, have entered into commercial transactions through their agents at the treaty ports, and they have been well satisfied with the results. It is stated by a British merchant settled at Yokahama that several facts had come under his personal observation which convinced him that the report which had been circulated that all the Daimios were inveterately opposed to foreigners was false, and originated with the Government. Almost a monopoly of the foreign trade is now enjoyed by the Tycoon and his officers. The agent of one of the most powerful of the Daimios told the merchant to whom we have referred, that his master was most anxious for commercial transactions with Englishmen, and supplied him with a list of the productions of his dominions, stating he would send from Yeddo one of his commercial agents to treat with him; and invited him to send vessels to Osaka, where the bulk of his produce was stored, and was much disappointed on finding that it would be in contravention of the treaty to do so. This must, however, have been an exceptional case, otherwise the commercial policy of Japan would long since have been altered. The exports have hitherto consisted chiefly of edibles for the Chinese market, tea, and silk. For more than two hundred years only two Dutch ships and ten Chinese junks had been permitted to trade with Japan. Fifteen thousand tons of shipping found profitable freights within the first six months after the partial opening of the ports. The first effect of a sudden demand for the produce of the country was to enhance prices, and thus to cause considerable distress. Silk, tea, wheat, and rice (although its exportation was forbidden) were never known to be so dear. This unexpected demand which sprung up for the most important commodities of Japan alarmed the Government. The rice of the country is said to be the finest and most nutritious in the world; the prohibition of its sale to foreigners was evaded, and large exportations took place. Discontent became general, and the Tycoon's Government was pressed on all sides to retrace its steps, and to revert to the ancient policy which, by keeping prices low had kept the people contented. To the distress occasioned by high prices succeeded

an apprehension of low. As the commodities of Japan were chiefly paid for in foreign coin, the great Daimios believed that all the silver of Europe would flow into the country, and by lowering prices, seriously diminish the value of the produce of their estates. Silk, tea, camphor, isinglass, vegetable oil, wax, and copper were in great request for European markets and produced very profitable returns. The celebrated lacquer ware was found not to be cheap, even in Japan. Ancient ware, like old china, is most prized, and small specimens inlaid with silver and gold of exquisite designs—derived probably from the collection of some embarrassed Daimio—were occasionally offered for sale at high prices; but such were rarely to be met with, for it is considered as disgraceful for a Japanese to part with his old lacquer as it is for an English gentleman to dispose of his family plate.\* A few of the Daimios still carry on a profitable commerce with foreigners; vessels, distinguishable by flags bearing the coats of arms of the proprietors and freighted with the produce of their estates, often entering the treaty ports, and finding a ready market for their cargoes.

Silk is one of the most important of the exports of Japan, as the country possesses the power of producing it in abundance. It is considered superior to the best China silk in strength, softness, colour, and gloss. When the silk of China was selling in the London market for 25s. per lb., that of Japan realised as much as 38s. It appears that 3000 bales were exported from Japan in the first year of the opening of the ports, but in the following year the exports increased to 18,000 bales. We learn from private sources that the quantity of silk now coming to this country from Japan amounts to from 30,000 to 40,000 bales. The tea-plant is supposed to be indigenous, having been observed growing wild in the hedgerows. The cottagers cultivate as much of it as is sufficient to supply their wants.

The aggregate value of the trade of Japan in the first year after opening the ports is estimated by Sir Rutherford Alcock as exceeding a million sterling, from which very large profits were realised by a few merchants, chiefly English, Dutch, and American. Whenever the policy of the Government becomes more liberal, and the prejudices of the great Daimios are removed, there can be no doubt that the country will supply an export trade of ten times the amount mentioned. Thousands of acres on which the tea-plant would yield abundantly are lying

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\* See the excellent little work of Mr. Hodgson, our first Consul at Nagasaki and Hakodadi, which is as instructive as it is amusing.

waste, and only a little improvement in the manipulation of the leaf is required to raise it to the level of the best Chinese tea. We may, therefore, look forward to a considerable addition to our imports from this quarter, and a competition with China which can scarcely fail to produce a fall in price. The exports of tea from July, 1860, to July, 1861, amounted to 5,000,000 lbs. The disposition to grow produce specially for European markets has been before noticed. Vegetable wax is an article much in demand, and, as soon as it was found profitable, 20,000 of the trees producing this substance were planted in the neighbourhood of Nagasaki; but they were carefully concealed from foreigners with a view to keeping up the price.

The capacity or inclination of Japan to consume British manufactures is not yet satisfactorily established. In consequence of the great ingenuity and imitative skill of the Japanese it may prove that there are few commodities which they cannot themselves produce and sell at English prices. Cotton to almost any amount might be grown in the country; and if machinery should ever be introduced, and mills set to work, the extremely low wages of labour, coupled with the great ingenuity of the people, might enable Japan to become an exporting country and even to undersell England herself in cotton fabrics. At present we can, of course, supply Japan with these productions much cheaper than native manufacturers. Woollen goods, perhaps, have the fairest prospect of meeting with a steady demand, since they would supply an important want. Good winter clothing is much needed. In the northern portion of Nippon and the island of Yesso the cold is severe, and the inhabitants are imperfectly protected from it. It is satisfactory, however, to learn that almost every staple of Manchester and Bradford which was imported into Japan was readily purchased.\* A marked increase in our imports from Japan has taken place in the past six months of the current year, over the corresponding period of 1862. In the one period they amounted to 309,566*l.*; in the other to 671,586*l.* The silk now expected in this country is valued at between three and four millions sterling, and we are informed that large consignments of cotton, far superior to any that is grown in India, are also on the way to England.

The renewed intercourse with foreign countries, and the disgraceful rapacity of foreigners, produced a severe monetary crisis, which both perplexed and alarmed the Government and threatened to drain the country of the whole of its gold. The Japanese had once before experienced this serious in-

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\* Parliamentary Paper, p. 58.

convenience. The Portuguese and the Dutch both derived enormous profits from their exports of the precious metals. Kämpfer, the old Dutch writer, remarks, that had the Portuguese enjoyed the trade of Japan but twenty years longer, there would have been a flow of gold and silver from this Ophir of the East into Macao, such as there was into Jerusalem in the time of Solomon. Unfortunately no regulated standard of exchange had been established in the treaties with foreign Powers. The 'cash,' which is of iron, is almost the only coin which the Japanese common people use. The principal silver coin is the itzebou, representing about 1s. 8d. of British money; but the gold kobang, which was intrinsically worth 1l. 2s., could be obtained for four itzebous, or 6s. 8d. of our money. The merchants, of course, at once detected this difference in the specific values of the silver and gold coins, and discovered in it a mine of wealth, compared with which the returns of commerce would, they thought, be altogether unworthy of their attention. A clause had been introduced in the American treaty, and, after its example, into those concluded with other Powers, that all foreign gold and silver coins should freely circulate in Japan, and be exchangeable with Japanese coin weight for weight. The merchants accordingly immediately converted their dollars into itzebous, and their itzebous into gold, realising at once a profit of about 200 per cent. Four silver itzebous (a dollar and a third in weight) would, it was found, purchase a kobang of gold, exchangeable in China for 18s. 4½d. The merchants thus found themselves unexpectedly able to triple their capital by two very simple operations, which they could repeat several times in a year. Demands for itzebous, to immense amounts, in order to exchange them for gold, were daily sent in to the Japanese mint. The Government was distracted, and at its wits' end how to evade or to meet these unexpected requirements, which they felt were opposed to justice and fair dealing. It seemed as if a few greedy foreign traders were plundering the country of its gold as completely as Pizarro and Cortez plundered Peru and Mexico. The true remedy, of course, was in the hands of the Government. It was in their power at once to put an end to the drain of gold by altering the expressed relative values of gold and silver. This they did; but not until after very serious losses had been sustained, and the public feeling had been exasperated at what was deemed, with justice, an outrageous spoliation. This was an unfortunate recommencement of our commercial intercourse with Japan, and it tended greatly to excite those feelings of hostility towards foreigners which subsequently displayed themselves in public outrages and secret assassinations. It determined

mined the Government to solicit from the Western Powers a suspension of their treaty rights and an extension of the time appointed for opening the additional ports.

As the Japanese use little gold in ornament, and the jewellery of the ladies is chiefly silver, much of the gold—in which the country has been supposed to be exceedingly rich—has probably either been melted down into ingots, or is hoarded in the form of kobangs, in the palaces of the Daimios. Several of the Japanese islands have been long renowned for their gold production, but foreigners have never obtained access to the mines; and, since the monetary crisis which so greatly embarrassed the Government, stringent orders have been issued to withdraw the gold coin entirely from circulation.\* The province of Matsmai, in the island of Yesso, is believed to have long yielded a steady supply of gold of extraordinary purity. Silver is also known to abound. The iron-mines of Yesso are very productive, and the temper of Japanese swords proves that they possess the art of converting the ore into steel of first-rate quality. Nippon has plenty of copper. The abundance of this metal is so great that it is commonly used in the houses, public buildings, and ships. Utensils of every description are made of it, but its exportation is prohibited. Europeans are allowed to visit the lead-mines, some of which produce as much as 85 per cent. of pure metal. Those near Hakodadi were visited by Sir Rutherford Alcock, who inquired of the superintendent why the Government would not permit the produce to be exported. The reply was characteristic. 'We have none to spare.' 'None to spare,' said the Minister, 'what can you use it for? You neither employ it in building nor in utensils.' 'We want it all for ball practice,' said the superintendent. The restrictions on the exportation of copper originated in the persuasion that the Government had been grossly cheated by the Dutch, who made enormous profits from their importations of this metal. It cannot now be lawfully sold; even for the repair and re-coppering of foreign ships a Japanese jury must first meet to estimate the quantity required. There is an inexhaustible supply of sulphur, as might be expected from the volcanic character of the country, and all the ingredients of gunpowder are found. Japan is richly provided with coal. But all these elements of future wealth are as yet very imperfectly developed. The mines of every description are quite in their infancy, and no engineering skill has yet been applied to them. The time, we trust, is at hand when they will be made available in commerce;

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\* The use of it as a medium of exchange with foreigners is now prohibited under the penalty of death.

and the notion that the country would be permanently impoverished by permitting the export of its metals will be exploded, together with many other fallacies which keep Japan (although its people are possessed of as keen and practical intellects as any in the world in all matters of public economy) in a state of puerile ignorance, which is equally derogatory to its intelligence and civilisation.

The military resources of Japan have been variously estimated. The old Dutch writers, professing to be guided by the native authorities, calculate the number of troops which the different independent princes could bring into the field at 368,000 infantry, and 38,000 cavalry, in addition to the force which the Tycoon is stated to possess, and which constitutes a separate army amounting to 100,000 men. If every independent prince is bound to contribute his quota of troops for the service of the Imperial Government, the army of Japan will rank as one of the largest in the world. The force of the Tycoon, however, we suspect, consists only of troops furnished by such of the Daimios as hold their estates direct from him on the condition of military service. There will then remain the great princes of Satsuma, of Fizen, of Mito, and others, whose retainers would constitute so many independent armies, subject to no authority but that of their respective chiefs. This military as well as civil independence of the great Daimios constitutes the real difficulty of the Tycoon in his relations with foreign Powers; for it is doubtful whether he is able to enforce an acquiescence in his policy by these great princes without entering on a civil war; and an aggression upon the independence of one prince would probably unite all the others in a league against him. The Government of the Tycoon is therefore necessarily a weak one; and having been originally founded in usurpation, it is liable at any time to be overthrown by a successful rebellion against it. The Prince of Satsuma, with his colonial dependency of the Loochoo Islands; the Prince of Xendai, with his vast territorial possessions; and the Prince of Kanga, possessing the revenue of a small kingdom, together with many others, might combine, and bring into the field a much larger force than that of the Tycoon himself. These proud and overbearing princes have in former times assumed often an attitude of armed hostility, and set not only the Tycoon but their Spiritual Emperor at defiance. The difficulties of making the Tycoon responsible for the acts of the great Daimios are thus exceedingly great. It appears, indeed, by recent advices, that the Tycoon himself is not averse to the alliance of foreigners, and that he may possibly come to such an understanding with the Western Powers as may enable him not only



only to crush all internal opposition, but increase his own power at the expense both of the Daimios and the Mikado, and inaugurate an entirely new era in the policy and history of Japan. A European force which should undertake the invasion of Japan would undoubtedly find itself engaged in a very formidable undertaking, if the nation were united. A large proportion of its people is regularly trained to arms. To destroy Yeddo, a city constructed of wood and paper, would be an easy task ; to bombard the ports might be a simple operation ; but to penetrate the interior, and bring a Japanese army to a decisive action, would be one of the most arduous operations that any commander could undertake. The roads through which Sir Rutherford Alcock passed in his journey from Nagasaki to Yeddo were found everywhere practicable for artillery, but never, he says, was there a country less adapted for the movements of cavalry. In the event of any advance into the interior, the want of interpreters, of facilities of communication, and of means for obtaining information, would, he thinks, be very great, and, as regards the mass of the population, an invading army could look for nothing better than neutrality.\* The Japanese Government has for a long time past been purchasing cannon and rifles from Dutch and American traders. The Prince of Satsuma and other princes have done the same, and the troops have been scientifically instructed in their use. The roar of guns and the rattle of musketry has been constantly heard in Yeddo and in the neighbourhood of other great towns ; and as we have before stated, a school of musketry was established in 1860. Nor have European tactics been neglected. Mr. Fortune, the latest traveller in Japan who has given to the world the results of his observations, frequently saw large bodies of troops put through their evolutions in the parks of the Daimios, and no doubt can exist that they have been regularly trained in the art of European warfare. A curious confirmation of this is supplied by Mr. Fonblanque, the title of whose interesting work we have prefixed to this article. When Count Eulenberg introduced the members of the Prussian Legation to the Minister for Foreign Affairs at Yeddo, that functionary appeared struck by the name of one of the attachés. 'Brandt! Brandt!' he exclaimed, 'Are you the author of a work on military tactics?' M. de Brandt replied that his father had written such a work. 'Oh,' said the minister, 'it is very good ; I had it translated from the Dutch into Japanese—I will give you a copy.' On the following day a Japanese translation of General de Brandt's 'Treatise on the Three Arms' was sent to the Prussian embassy.

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\* Sir R. Alcock. 'Three Years in Japan,' vol. ii. p. 223.

Nor have the warlike preparations of Japan been confined to the organization and improvement of its field force. The Government has taken measures for the defence of the ports and the capital. Four large and formidable forts now defend Yeddo ; and at Hakodadi one has been completed mounting several hundred heavy cannon. The preparations at Nagasaki are of the same character, and the prevailing opinion seems to be that the artillerymen will stand to their guns. It is scarcely possible to arrive at any other conclusion from these symptoms of spirit and determination than that the country has been systematically prepared for a war which it was believed impossible to avert. The first Power that entered into new commercial relations with Japan was, as is well known, the Federal States of America. That Government endeavoured to acquire a position superior to that of any other of the Treaty Powers. It hoped to obtain such a preponderating influence as might give it a species of protectorate over Japan, and, in the hope of conciliating the Government, it submitted to injuries and indignities with far greater patience than the other Powers. It did not promptly resent even the assassination of its Secretary of Legation, but its minister remained at Yeddo when the other envoys indignantly withdrew. This mean and undignified conduct has met only with the treatment which it deserved. The first overt act of hostility committed by the Japanese against foreign Powers has been directed against the Federal States ; an American ship having been deliberately fired into by two war-steamers. British, Dutch, and French ships have since experienced similar treatment ; and hostilities have broken out, if not with the Tycoon, with several of the princes who either always disclaimed his authority or have now for the first time revolted from his government.

The present Tycoon has on more than one occasion evinced a disposition to adopt a more liberal policy than any of his predecessors would have approved. He is said to have received a great accession to his revenue by opening his ports ; and some of his recent measures certainly indicate a determination to emancipate himself from the domineering influence of the great Daimios who long surrounded his Court. The presence of these nobles, with their vast bands of retainers, devoted to the persons and interests of their lords, in Yeddo, had a necessary tendency to overawe the Tycoon. It is impossible to imagine anything more incompatible with the functions of government than the quartering in the capital of from 200,000 to 300,000 two-sworded retainers of these great princes, constantly brooding over sedition and hatching conspiracies and plots. A very important ordinance has, however, been lately issued by the Tycoon, which amounts almost to  
a revolution

a revolution in the State. It directs that the highest Daimios are henceforth to visit Yeddo only once in seven years, and then only for a hundred days at a time; the second class only once in three years, and then for a hundred days; while a third class are to reside there for half a year; but their wives and families are to return to and remain permanently in the provinces. This appears to be a blow artfully struck at the power of the great Daimios, and is calculated to greatly diminish their political influence. It relieves them from the heavy charges and inconvenience which attended their periodical progresses to the capital, and restores them to their families; but whether they will consider these advantages as a sufficient compensation for the loss of power may be doubted. That great noblemen should not be permitted to visit the capital of their country oftener than once in seven years, certainly imposes a galling restraint on their liberty. It degrades them at once, as it were, from powerful peers to mere landed proprietors. Although there was no political institution or assembly which enabled them to give a constitutional expression to their opinions, their presence in Yeddo made itself felt in every action of the Government. The edict is said to have caused the utmost consternation among the people and shopkeepers of Yeddo. How would London receive an announcement that the Court was thus shorn of its splendour, that our nobility would reside in future wholly on their estates, and that the wives and daughters of our country gentlemen would never again come up to 'town'? There would be a wild cry of despair in every street, and half the tradesmen of the 'West End' would be bankrupts within a year. Whatever may be the motive of so radical a change, it seems to prove that the power of the Tycoon must be greater than has been supposed, to have enabled him to effect so complete a social revolution. A struggle has been going on for centuries between the Tycoon and the great princes of Japan, and it is far from having been yet brought to a conclusion. The position of all foreign Powers in that country is most anomalous. By an edict issued in the seventeenth century it is declared high treason to harbour any foreigner within the dominions of the Tycoon. This edict has never been annulled; and a Japanese who should take the life of a minister of any foreign Power might plead the law of his country in justification of the act. Hence the impunity enjoyed by the murderous assailants of the British embassy, and by the political assassins who have been busy at their bloody work ever since the conclusion of the treaties. They are secretly applauded, and are left unpunished by the Government. It is doubtful whether any of the treaties with foreign Powers have been  
ratified

ratified by the Mikado, and without such ratification they have, say the Japanese, no binding force. It is not even certain that he could venture to ratify them in opposition to the will of the powerful Daimios, and it is questionable whether the treaties possess any legality beyond the territory of the Tycoon.

The history of Japan proves how precarious the life of this great officer is when he is suspected of inclining to a policy opposed to the feeling and supposed interests of the great aristocracy of the nation. The real position of the present Tycoon is involved in much uncertainty. He left Yeddo on a visit of ceremony to the Mikado at Miaco, but he had not, at the last advices, after a prolonged absence returned to his capital; and some persons well acquainted with Japan, bearing in mind the premature end of so many of his predecessors, have felt a doubt whether he was alive, and at least apprehended that he was a State prisoner at Miaco, and that the orders alleged to have been issued in his name to close the ports might have been forged by the disaffected Daimios, using his name and that of the Mikado for the furtherance of their political views.\* The Tycoon has hitherto kept the great princes under some control by means of a vast system of bureaucracy and espionage, and he may have looked to possible future alliances with the Western Powers for the means of establishing a complete ascendancy over his turbulent advisers; and, perhaps, to the growth of a popular party as an effectual counterpoise to their authority in the State.

The existing state of society in Japan is not, to use a celebrated formula, calculated to confer 'the greatest happiness on the greatest number.' The general aspect of the population is one of poverty in harsh contrast to the amazing richness and fertility of the country:—

'Few signs,' wrote the British Minister in 1861,† 'of absolute destitution meet the eye, but masses of population with nothing evidently beyond the barest necessities of animal life, a roof covering the area of a few mats, on which groups of eight, ten, or more men, women, and children crowded in the doorway as we passed, must be all huddled together more like cattle than human beings, at night, and with just as little provision for comfort or decency. Some few of the larger towns had a better aspect, and a superior style of house in the principal thoroughfares, but only where there were signs of trade. The inhabitants of the purely agricultural districts and towns were all

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\* On the other hand, we learn by a telegram received while these pages are passing through the press, that the Tycoon has adopted a flag (probably bearing a new device), and has authorised foreign ships of war to fire upon all Japanese vessels that do not bear it. If this be so, the Tycoon must have broken with the princes, and a civil war has probably commenced.

† 'Correspondence respecting affairs in Japan,' 1862.

poverty-stricken. From such general features I draw the conclusion that although the fertility of the soil is great, and turned to the best account by a plentiful supply of labour of the cheapest kind, yet little superfluity is produced, or, if there be any, it is absorbed almost entirely by the Daimios and their retainers, who are the non-productive classes, and proprietors, I believe, of nine-tenths of the soil. Of peasant or other landed proprietors, out of the Daimios class, there seem to be few, if any, except under altogether exceptional circumstances. Judging from the manifest poverty of the frugal labourer, the whole produce of the soil, save the barest pittance necessary to support life, must go to the Daimio.'

'The aversion of the ruling class to the introduction of European ideas is natural enough when the condition of the population and the contrast which it presents to their own enormous wealth and almost regal splendour is considered. The Daimios see clearly enough what the consequences would be of a free intercourse of foreigners with the people, and they therefore systematically close up every avenue by which they can be approached.

The Bishop of Victoria seems to have accurately comprehended the state of Japan, and to have predicted a political crisis such as has now occurred. 'Between the haughty and exclusive aristocracy,' he says, 'and the lower classes of society a wide chasm exists. The mercantile class sometimes contains individuals of considerable wealth, but merchants are held in low repute. The great Daimios are said in many instances to have greatly diminished in wealth. Several princes formerly possessed, like the present Prince of Kanga, a million of kokus of annual revenue, who have since suffered a decay in their territorial income or a division of their princely estates. They are reported also to view with disfavour the possible rise of a rich mercantile class in their midst, as a social element politically dangerous to their own retention of power. In some respects the state of Japan resembles the political condition of English society in the times of our Plantagenet princes; and it is not beyond the bounds of possibility that an enlightened and resolute Tycoon might imitate the policy of our Edward IV. in fostering a middle class as a counterpoise to the power of the great barons, and building up the royal prerogative on the liberties and privileges of a newly-enfranchised mercantile and trading portion of the population. A liberal Tycoon encouraging foreign intercourse and promoting the interests of domestic commerce, might compensate himself for the enmity of the Daimios in the growth of a commercial and popular party in the state. Even a civil war among the territorial grandees, excited by the grave questions

questions of their foreign policy and relations towards the outer world of mankind, might, like the English wars of the Roses, issue in the downfall of the exclusive power of Japanese princes and barons, and at length inaugurate better government in Japan.\*

The Japanese are endowed with many qualities which, under wiser rule, would render them worthy of esteem. They possess a certain nobility of character (if we may so call it), which not even their great moral corruption has been able altogether to destroy. They possess quickness, shrewdness, and tact, above all other Asiatics. They are intellectual in an eminent degree; all can read, and are fond of reading. Even the agricultural labourer will snatch a few minutes from his work to indulge in the perusal of some favourite book. In manners (as we have already observed) they have nothing to acquire from Europeans. The bearing of the humblest peasant is marked by a natural courtesy; while that of the middle and higher classes is distinguished by a studied dignity and refinement. To these natural and acquired graces of character there is, however, one serious drawback. A more licentious people does not exist. The very toys of the children are designed to inoculate the infant mind with vice; shame is unknown, and indecency of language and conduct is all but universal. Government and religion equally countenance and sanction vice. Deception is universal, and all classes laugh immoderately when detected in a lie.† They have no real religion, nor do they affect any. All contemplate death with indifference and speak of it with levity. The higher classes are keen, sceptical, and sarcastic, believing nothing, hoping nothing, dreading nothing. Their only religious rites are scenes of festive mirth, combined with abominable immorality. It is astonishing that a thousand years of such misgovernment as would have utterly barbarised any other people should have left so much that is humane, polished, and amiable in their character. But it would be opposed to the attributes of human nature if a people, in spite of all the outward indications of enjoyment, could be really happy in a state of society where there is no natural play of the passions, no healthy stir of life, and none of its animating moral excitements. Political apathy has long been the characteristic of Japan, and the dull level of life has been broken only at

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\* 'Ten Weeks in Japan.'

† 'The impossibility of ever obtaining truth in great things or in small from the officials whatever their rank (the highest to the lowest are equally false), and their unceasing and determined efforts to mislead, form one of the great difficulties of our position.'—Sir Rutherford Alcock to Lord Russell, July, 1861. 'Correspondence,' p. 4.

distant intervals, like the surface of their fair country, by portentous and desolating convulsions. The same education, the same manners, and the same vices, have prevailed from generation to generation, and the people live in constant dread of the laws and of each other. We appear now to be on the point of being brought into closer relations with this remarkable country. The great aristocracy have apparently determined to risk the consequences of a rupture with all the Treaty Powers, rather than acquiesce longer in a policy which they foresee must sooner or later lead to a great diminution of their importance, and perhaps jeopardize the security of their great possessions together with their hereditary position in the State. They dread war less than revolution; but they do not seem to be aware that revolution will be the inevitable result of war. They hope, perhaps, again to banish foreigners, as they banished them before, and that peace will then for ever reign within their walls and plenteousness within their palaces. It would seem that our relations with Japan cannot be placed on a satisfactory footing until the Tycoon succeeds in establishing his ascendancy over the powerful Daimios, and acquires such an increase of political strength as shall enable him to reverse the traditional policy of the empire. In the conflict which appears inevitable,\* the Mikado, the great princes, and the priesthood will probably be ranged on one side, and the Tycoon and his supporters on the other. Redress for the insults and injuries which the foreign Powers have received will be sought not at Yeddo but at Miaco, and the provincial capitals, fortresses, and castles of the princes who have defied them. The Ministers of the Tycoon have, there is reason to believe, striven to avert this crisis, but in vain. In their communications with the foreign Envoys they have declared, and perhaps with truth, that although they made treaties, they have not the power to compel their observance. The spirit of hostility to foreigners has, however, we firmly believe, no existence among the people. Protected, as they suppose, by their great fortresses, the Daimios doubtless think that any attempt to force the defiles and penetrate the rice-grounds, in which the interior of their country abounds, would only result in disaster to any army that might attempt it. It is earnestly to be hoped that the necessity for so hazardous an operation may not arise. But if the existing difficulties should be adjusted, grave complications, we fear, will arise when the period comes for opening Yeddo, Osaka, and other great ports in 1868. If the result of any contest with European Powers should be the subversion of

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\* See note \* to p. 476.

the power of the Daimios, the people of Japan will have no reason to regret it. These great princes possess no claim on our sympathy or respect; for of all forms of government that of a domineering oligarchy is the most pernicious and degrading. It is despotism in its most oppressive form, and in Japan is equally inconsistent with the progress and the happiness of the people.

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- ART. VI.—1. *Petizione di Novemila Sacerdoti Italiani a S. S. Pio Papa IX. ed ai Vescovi con esso uniti.* Torino, 1862.  
 2. *Per la Causa Italiana, ai Vescovi Cattolici Apologia di un Prete Cattolico* [Carlo Passaglia]. Firenze, 1861.  
 3. *Della Scomunica* (by the same). Firenze, 1861.  
 4. *Il Papato, l'Impero, e il Regno d'Italia, Memoria di Mgr. F. Liverani.* Firenze, 1861.  
 5. *La Curia Romana e i Gesuiti.* Firenze, 1861.  
 6. *La Dottrina Cattolica e la Rivoluzione d'Italia,* di Mgr. F. Liverani. Firenze, 1862.  
 7. *Questioni Urgenti, Pensieri di Massimo d'Azeglio.* Firenze, 1861.  
 8. *Ricordi di Roma.* Per Filippo Perfetti. Firenze, 1861.  
 9. *Il Clero e la Società, ossia della Riforma della Chiesa,* per F. Perfetti. Firenze, 1862.  
 10. *All' Illustre Carlo Passaglia, Lettera in Favore della Causa Italiana,* di Girolamo Bobone. Firenze, 1862.  
 11. *La Chiesa e l'Italia,* per Eusebio Reali. Milano, 1862.  
 12. *Della Rinascenza Cattolica, Narrazione d'un Alunno di Propaganda Fide.* Firenze, 1862.  
 13. *La Cristiana Procedura dell' Attuale Inquisizione Romana,* per P. Mongini. Intra, 1862.  
 14. *Du Père Passaglia et de l'Italie.* Turin, 1862.  
 15. *L'Episcopato Italiano e l'Italia,* per opera di Lorenzo Zaccaro. Napoli, 1863.  
 16. *Lettere d'un Dignitario Ecclesiastico ad un Uomo di Stato.* Torino, 1862.  
 17. *Sympathies of the Continent.* By J. B. von Hirscher, D.D.; translated by A. Cleveland Coxe. Oxford, 1852.  
 18. *Lo Stato Attuale della Chiesa.* Per G. B. Hirscher, traduzione di Ottavio Tasca. Milano, 1862.  
 19. *Journal of a Tour in Italy.* By Christopher Wordsworth, D.D., Canon of Westminster. Second Edition, two vols. London, 1863.  
 20. *The American Quarterly Church Review,* July, 1863. New York.



21. *The Colonial Church Chronicle*, January to August, 1863. London.
22. *Why I left the Communion of the Church of Rome*. By the Rev. Father Felix. Calcutta, 1860.
23. *Anglo-Continental Society. Report to the Subscribers to the Special Italian Fund*. London, 1862.

THE Italian pamphlets of which we have given the titles are in great part taken up with the discussion of questions which we do not now intend to consider—the lawfulness of the present Italian Government, the relations of Church and State in Italy, and, above all, the temporal sovereignty of the Pope. But they all indicate the existence of a widely-felt discontent with the condition of the Roman Church, and of ardent wishes for change. Not that the changes which the writers in general advocate are of such a kind as English Churchmen would consider to be satisfactory; for almost all declare their strong adherence to the principles of Romanism, and their conviction that the reforms which they urge, far from drawing in their train any alteration of the Roman doctrines, would establish these doctrines—including the spiritual supremacy of the Papal See—more firmly than ever; that they would deliver the Papacy from its present disadvantageous position of antagonism to the spirit of the age, and would place it triumphantly at the very head of human progress. Almost all are strong in denouncing Protestantism; and some of those who are most zealous in agitating for change, and who have suffered most in the cause, are especially devoted to certain doctrines which we regard with the greatest dislike. Monsignor Liverani, for instance, assures us over and over that he is a sound ‘Catholic’ in all respects; that he is a ‘special son of the Holy See;’\* he tells us that he wrote a book on *Reliques*, the purport of which may be guessed from the fact that he dedicated it to two influential cardinals;† that he bore a larger part than the world in general is aware of in establishing the dogma of the Immaculate Conception; that he relies especially on the patronage of the Blessed Virgin, that he has exhorted the Pope to seek the same patronage in the troubles which beset him,‡ and that but for her especial support he would have been unable to go through the labour of compiling a collection of ancient writings, which he is about to publish under the title of ‘*Spicilegium Liberianum*.’§ And of Passaglia, whose name and

\* ‘*Il Papato*,’ &c., 16.

† *Ibid.* 84-5.

‡ *Ibid.* 103-4.

§ So called from the ‘*Liberian basilica*’—the church of St. Mary Major, of which the editor is (or was) a canon. Among other things he promises some inedited pieces of St. Anselm, and some documents, hitherto unknown, which relate to the history of Becket.

history are better known, we need hardly say that he was the theologian to whom the Pope especially committed the task of asserting the Immaculate Conception, or that at present he professes to limit his desire of reform to the abolition of the Pope's temporal power; that he holds all Roman doctrine, with the highest views of the spiritual prerogative belonging to the successor of St. Peter. The position, therefore, of those whom it is the fashion with the dominant party to style *Passagianists*, is very different from that of Englishmen who look with tolerant composure on the Pope's temporal sovereignty (although they would like to see his dominions better governed), but believe the Roman Church to be grievously corrupt in doctrine. But for us as English Churchmen the questions arise,—With what feelings are we to view the contest which is now raging in Italy? And shall we merely look on with interest as spectators, or is there a call for something more on our part?

We hope, by the help of the books and pamphlets before us, to give some answer to these questions; and before proceeding further, it will be well to notice some of these works more particularly.

The name of Massimo d'Azeglio, distinguished in literature, in politics, and in art, is enough to bespeak attention to his 'Thoughts on Pressing Questions.' This pamphlet is for the most part political, and therefore beyond our present range. We shall only mention here that the author, while he wishes to see an end of the Pope's temporal power, would make Florence rather than Rome the capital of Italy; but we shall find occasion to quote his opinions on other points as we go on.

Another layman, Signor Mamiani, late Minister of Public Instruction, is said to be the author of '*La Rinascenza Cattolica*.' On opening this, we were agreeably surprised to find that, instead of inflicting on us a grave and formal treatise, the author has cast his opinions into the shape of a pleasant little romance. The supposed writer is an ex-student of the Propaganda, who, having gone as a missionary to Japan, and having endured ten years of imprisonment at Nagasaki, is suddenly set at liberty, and finds a passage to Europe provided for him on board an English ship, the '*Isaaco Newton*.' His ignorance of English and the confusion of mind produced by his long seclusion prevent him from picking up any information during the voyage, so that on landing in his native country he is utterly in the dark as to all that had taken place since he left it. At Civita Vecchia, where he is hurried from the quay to the railway station, he has just time enough to observe that the town is illuminated; and, on asking the reason, he is told that a bishop had been elected a few hours before.

'Elected!'

‘Elected!’ he asks in amazement—‘by whom?’ And the answer is—By the clergy of the diocese, to whom the whole power of choosing their bishop had been entrusted, until the people should be fit (as it was hoped that education would speedily make them) to share in the election, as in primitive times. On reaching Rome, the autobiographer finds wonderful changes and improvements everywhere. His old college has been extended by splendid new buildings; its library is vastly increased; its polyglott press is the first of its kind in the world; and the number of students is thrice as large as of old. The whole aspect of the city is altered for the better. Quarters which had formerly been uninhabited are covered with handsome houses and magnificent public buildings, and a similar change has transformed the swarming and filthy alleys of the Ghetto. Architecture and the other fine arts have received a new impulse and development. The ruins have been cleared out, and are carefully protected; the Campagna has been reduced by tillage to fertility and healthiness—partly through the labour of the mendicant friars, who have been compelled with gentle violence to make themselves of some use in the world. The members of the other religious orders have been employed in teaching schools or in similar works of public advantage. The clergy have been reduced in numbers and greatly improved in efficiency, while a beneficial redistribution of ecclesiastical property has been carried out, without any spoliation and with a due regard to all existing claims. The Pope (who, instead of coldly giving his hand to be kissed, clasps the confessor of Nagasaki in his arms, kisses him on both cheeks, begs him to relate his story, and weeps over the touching narrative) is relieved of his temporal sovereignty, but finds himself strong in the affections of the faithful. Out of regard to the Holy Father’s feelings, King Victor Emmanuel refrains from displaying his state in Rome, and resides at a villa near Frascati; while the Capitol is used only for the greatest national solemnities, and the public offices are studiously planted in parts of the city where they may be least likely to meet the Pope’s eyes, and to suggest unpleasant recollections to him. By the opening of new careers for activity, the temptations to idleness are removed out of the way of the Romans; and a Festival of Labour holds a conspicuous place among the religious functions, which are now celebrated with a fervour very unlike the dreary mechanism of former days. Universal toleration is established, and Protestant propagandists, being at liberty to do their worst, are far less successful than when working under disabilities. Men whom the corruptions of the old state of things had driven into unbelief are reclaimed; conversions from Protes-

tantism take place every day. And the story winds up with a sort of vision, in which the Pope, throned on golden clouds and with his countenance transfigured, is seen bestowing his benediction on Rome and on the world.

From such visions it is not pleasant to descend to the realities which are set forth by Mgr. Liverani. To judge by the pamphlets which he has published, we should suppose this writer to be an honest, learned, somewhat vain, and very indiscreet person—just the kind of man whom enemies would find it easy to discredit, but whose weaknesses ought not to be allowed to invalidate the real value of his evidence with any candid reader. Nor can any disparagement which the dominant party of Rome may now cast on him, and on others who have placed themselves in opposition to it, do away with the fact that, so long as they were on good terms with that party, offices of honour and trust were largely bestowed on them. Liverani's pamphlets seem to have raised a considerable sensation,\* and the disclosures which they contain must doubtless have been very unpleasant to the persons concerned.

Canon Reali's case is in so far like that of Liverani, that he has very ugly stories to tell of the body to which he belongs,† and that, for advocating freedom of conscience and the cession of the Pope's temporal power, he has been visited with heavy penalties. The chief object of his pamphlet, 'The Church and Italy,' is to show that, by the principles of the Church, certain declarations of a political kind which were made by the bishops assembled for the canonization of the Japanese martyrs, in 1862, are not entitled to any authority.

Perhaps the most important, certainly the most instructive, of all these pamphlets is that on 'The Clergy and Society,' by Perfetti, who was formerly secretary to Cardinal Marini, president of the Chisilieri College, and Librarian of the University of Rome. He tells us in his 'Ricordi,' that when he first entered Rome in youth, he viewed everything around him under the enchantment of the ideal; but the experience of more than twenty years has sadly dispelled his illusions. He writes with a calm earnestness and with an air of thorough conviction, pointing out without unnecessary bitterness the defects of the Church, and suggesting the means by which he believes that they may be healed.

Passing over, for the present, the other Italian publications, we come to Dr. Wordsworth's 'Tour in Italy.' The whole time occupied in this tour was less than two months—from the 13th

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\* 'La Curia Romana,' &c., 38.

† Ibid. 95-6.

of May to the 9th of July, 1862—and the book is a remarkable proof how much may be done in so short a time by a man who has a purpose and knows how to set about his work. In this tour, as in those visits to France of which he has given an account in earlier books, Dr. Wordsworth's object was chiefly to observe the state of religion. On starting from London Bridge, the learned Canon of Westminster finds himself in company with 'some Irish Roman Catholic priests, going to Rome for the great gathering there at Whitsuntide' (the canonization of the Japanese martyrs); and doubtless he had some controversial talk with them, although no record of it is preserved. But immediately on crossing the Belgian frontier, he gets into explanations with 'a respectable-looking man, about fifty-six years of age,' and the war is renewed with one Romanist after another on all possible occasions—in coaches, in railway carriages, in steamboats, in churches, in colleges, and in all manner of other places. Dr. Wordsworth relates his interviews with persons of note, whose names are in some cases given, and in others are not hard to guess at. After hearing a Dominican preacher who abused Protestantism, he follows him into the sacristy, and thence into a room where the monk is quietly taking coffee with a friend. As the friend retires, the battle of creeds begins; and at length the Canon wrings from his adversary a declaration that he had not meant to say anything against the Church of England (although the reverend orator had not thought it necessary to make any such distinction in his sermon). In all these contests, it is natural that the Anglican champion should get the best of it, not only because he has (as we believe) truth on his side, or because he has the advantage of being his own reporter, but because so experienced a controversialist was necessarily far better armed for the strife than the average of such chance opponents as he was likely to meet with in his travels. But, although very decided in his opposition to Rome, Dr. Wordsworth is always willing to acknowledge anything which strikes him in the working of the Roman Church as superior to that of our own Church, such as the attendance of the people at week-day services.

It would be easy to find fault with the composition of Dr. Wordsworth's volumes, and to express dissent from some of his opinions; but we wish to speak of him not only with the respect which is due to his character and abilities, but with gratitude for what he has told us. To the second edition he has prefixed a letter from an Italian ecclesiastic, and one from 'an English Churchman.' Both are valuable; indeed the second letter (which fills about eighty pages) will probably be regarded  
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by many readers as the best part of the whole book, inasmuch as it conveys the impressions of a man who, if he cannot pretend to Dr. Wordsworth's learning, has had far larger opportunities of studying the state of religion from Piedmont to Sicily, hearing with his own ears, seeing with his own eyes, and carefully guarding against the danger of over-estimating such appearances as fell under his observation.\*

The late political changes, which have deprived the Pope of a large part of his territory, have produced a breach between him and the government of King Victor Emmanuel which is continually becoming wider. Partly as having himself suffered severely, and partly as having been intimately connected with the interests of the sovereigns who have been expelled from their dominions, Pius IX. is not disposed to acquiesce in the new order of things, and from the Roman side we hear loud outcries against violence, usurpation, tyranny of force, and the like. To these the liberal clergy reply, not only by such arguments as were used in justification of the English revolution of 1688, but by citing weighty authorities from the divines of a church which (unlike the Anglican Church) has never scrupled to advocate the right of insurrection in favour of its own purposes,† and by pointing to instances—many of them even within the present century—in which the Papacy has sanctioned revolutionary changes.‡ To the plea that the Pope has bound himself by oath never to consent to any diminution of his territory, they answer that the oath was imposed with a view of checking the alienation of St. Peter's possessions for private ends, and ought therefore to be interpreted with a limitation to that object.§ They urge that, for the good of souls which are endangered by the present discords, the Pope would do well not only to submit to the losses which he has already sustained, but to divest himself of the rest of that temporal sovereignty which is so badly administered, so incapable of being reformed unless by an entire change of system, so productive of mischief in innumerable ways, and so detrimental to the spiritual claims of the Papacy itself.|| 'Let foreign Catholics be persuaded,' says D'Azeglio, 'that no Italian, either in Rome or out of it, will any longer consent to be governed by priests. On that footing no agreement is possible.'¶ Into these political questions we

\* As this gentleman has withheld his name, we do not feel ourselves at liberty to publish it; but, for the sake of convenience, we shall quote him as 'L. M. H.'

† See, e. g., 'Il Papato,' &c., c. xi.

‡ 'Per La Causa Italiana,' 78-9.

§ Renzi, 148-9.

|| Ibid. 69.

¶ P. 58.

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have already said that we do not intend to enter; we mention them only by way of preparation for noticing their effect on religion.

One consequence of the differences which have arisen between the Pope and the Italian Government is, that, when a bishopric or an archbishopric falls vacant in the kingdom of Italy, it cannot be filled up, because the Pope refuses to confirm any nomination which may be made to it. And the number of such cases has now become very great. Upwards of fifty sees are said to be vacant by death\*—the archbishoprics of Milan† and Turin being of the number. Moreover, bishops are required at their consecration to take an oath to the Pope which must interfere seriously with their allegiance to any secular government which is not in entire agreement with the policy of Rome; and, while the existence of this oath is a difficulty for the Government in the case of bishops who are already bound by it, the exaction of it from future bishops is something which can hardly be endured. The Government has shown a disposition to concede much for the sake of a reconciliation with the Papacy. Under the ministry of Ricasoli it offered terms which included an entire renunciation of all share in the appointment of bishops;‡ but the Papal Court would not accept these terms. The enemies of the Papacy rejoice in this refusal, inasmuch as the offers were larger than any which an Italian Government is likely to make hereafter; and it appears to us that if, for the sake of overcoming the immediate difficulty, peace had been made on such conditions, the Government would have laid up for itself the seeds of yet more serious difficulties in the time to come. In the end of April last the Abate Passaglia proposed in the Turin Parliament that all bishops should be required to swear that they would be faithful to the Government and to the laws, and would not oppose Italian unity.§ But the motion was defeated, partly through the influence of the Ministry; and, if it had succeeded, the result would have been not so much to secure the loyalty of the clergy as to perplex them, and to scandalize the world by the sight of men bound by oaths which, in circumstances only too likely to occur, must become inconsistent with each other. Indeed the proposed engagement would have had no hold on the consciences

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\* 'L. M. H.,' 99; comp. Wordsworth, i. 72.

† It is a significant fact, that Rome has taken advantage of the vacancy in this see to attempt the substitution of the Roman for the Ambrosian liturgy in the Milanese Church.—Wordsworth, i. 77.

‡ 'La Dottrina Cattolica,' &c., 158-9.

§ Part of his speech was given in the English papers at the time. The whole debate is fully reported in his own paper, 'La Pace,' April 28—May 5.

of those who believe that, as Rome teaches, 'all oaths which are opposed to the interests of the Church of Rome are not to be regarded as oaths, but as perjuries,' and that 'oaths of allegiance which are prejudicial to the Roman See are not binding.'\*

The King has not yet taken any step as to the appointment of bishops, but has attempted to exercise his patronage in the case of some lesser dignities. Three clergymen of high reputation were named for vacant canonries of Milan, and the majority of the Cathedral Chapter formally thanked the Minister for having filled up their number; but the Vicar-Capitular, Mgr. Caccia, 'Bishop of Famaugusta,' who has administered the see since the death of the late Archbishop, refused to institute them, and at present, although they enjoy the income of their stalls, they are debarred from the spiritual functions attached to them.†

A like case has occurred at Florence, where Brunone Bianchi (the same, we believe, who has published a very popular commentary on Dante) has been nominated by the Crown to the mitred priory of San Lorenzo, but the Archbishop has refused to institute him. The difficulty as to the appointment of bishops forms the subject of two letters 'from a Dignitary of the Church to a Statesman' (No. 16 in our list), which were published at Turin, and may be found in English at the end of Dr. Wordsworth's book. The writer suggests, as a solution of the question, that the King should fill up the vacant sees, and should obtain consecration for his nominees from the prelates of his own dominions, without any reference to the Pope, whose claims as to the appointment of bishops the 'Dignitary' proves from history to be unfounded.

'I have good reason,' says the "English Churchman," 'to believe that those letters have made considerable impression on the minds of many laymen in influential positions at Turin and elsewhere. Though published in Turin, I traced their influence far away. One evening, at Naples, I chanced to be dining at a table-d'hôte, alongside two Italian cavalry officers. . . . One of them spoke so clearly and strongly on the need of Church reform and returning to the ancient rights of people and clergy, that I was quite struck, and remarked that he appeared to have studied such subjects carefully; he said he had lately fallen in with an *opuscolo*, published in Turin, which so thoroughly expressed his own ideas, that he could have fancied he had been writing it. This *opuscolo* proved to be those "Letters." More than once, in Naples and in the neighbourhood, priests told me they had been spreading them amongst their neighbours.'—p. 30.

\* Wordsworth, i. 80. We do not think it necessary to copy Dr. Wordsworth's italics here or in other quotations from him.

† Italian Letter in Wordsw., i. xx.



We have very lately been informed that the Turin Government was prepared to take up the question of investiture at the meeting of Parliament in this present month of October, with a view to ascertaining whether it might not be possible to dispense with the Papal approbation. The importance of this step can hardly be overrated.

The differences between the Government and the Papacy are continually coming to the surface. One occasion, of yearly recurrence, is the festival of Italian Nationality—the *Statuto*, as it is called,—in the beginning of June; and the works before us abound in details of the troubles which have arisen out of this celebration. At Milan, where Monsignor Caccia, in accordance with a decision of the ‘Sacred Penitentiary’ of Rome,\* forbade the performance of a *Te Deum* in the cathedral, the canons acted in defiance of the prohibition; and in the province of Milan, the day was kept with religious services in 308 parishes out of 498.† At Pisa, Dr. Wordsworth saw a large wooden building in course of erection, for the celebration of this festival, which had been forbidden in the cathedral (i. 194). At Florence, while the Archbishop forbade the celebration, and his mandate was obeyed in the service of the cathedral, not only did the municipality procure a military chaplain to perform a religious office in the Cascine, but the outside of the cathedral itself was brilliantly lighted up at night,—being, as Dr. Wordsworth was informed, under the management of a different body from that which has the control of the ritual within the building (i. 216-7). Throughout the dominions of Victor Emmanuel similar collisions yearly take place. The Archbishop of Naples at one time suspended twenty priests from the performance of divine offices for taking part in the solemnities of the *Statuto* (*Ib.* ii. 255). The Bishop of Guastalla, having reason to suppose that it was about to be observed in his cathedral, issued a prospective interdict against that and all other churches of his city in which the day should be marked by any extraordinary service (*Ib.* ii. 2-18); and, on the other hand, the vicar-capitular of Grosseto has been tried and fined by a civil tribunal for circulating among the clergy an order against the celebration (*Ib.* ii. 256).

Some bishops have charged their clergy to employ the confessional as a means of inducing soldiers to desert from the national army; and for these and similar political offences, prelates and capitular vicars have been condemned by secular courts. For causes of this sort the Archbishops of Pisa, Fermo, and Spoleto (two of them cardinals), with several bishops of Southern Italy,

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\* Reali, 35.

† Italian Letter in Wordsw., i. xxi.

are (or lately were) in prison, while many others have been driven into banishment.\* It is, of course, easy to cry out against such things as acts of antichristian tyranny, and, as the students of the Propaganda were primed to do in their effusions of last Epiphany, to draw parallels between the King of Italy and King Herod of Jewry.† But, until we see some better evidence than violent language, we shall continue to believe d'Azeglio's confident statement, that 'no Catholic is persecuted for matters of faith' (p. 10); that in every case there has been some political offence to justify the severities of the Italian Government.

The despotic character of the Papal system comes out very strongly in the evidence of the books before us. Step by step, as ecclesiastical historians can trace, it has grown to be an absolutism, by which the bishop has all power over his clergy, and the Pope has all power over the bishops.

This tendency to absorb all lower authority in that of higher officials has lately been exemplified by some bishops in Southern Italy, who exact from candidates for the priesthood a secret oath to obey them, and to report themselves immediately to them, 'thus entirely breaking the ordinary relation between the parish priest and his curates' ('L. M. H.,' 47). Of the working of this new engagement, an instance was given by a Neapolitan *parroco*.

'He had requested a newly-ordained priest to help him in the annual benediction of the parishioners' houses, which he gladly did; but in one street he sent him into stood the guard-room of the National Guard of the town. The young priest said he could not bless that guard-room; and when pressed to give his reason, said that he was not at liberty to do it; that he had taken an oath, newly imposed by the bishop, and was bound to do nothing against his injunctions, but must report to him all he did, and that giving benediction to the national guard-house would be contrary to the injunctions he had received.'—'L. M. H.,' 47.

Pius IX., it appears, is in the habit of killing a bishop or a cardinal now and then, either by those violent explosions of temper to which the placid-looking old man is known to be subject, or by some cutting acts of injustice or neglect. Cardinal Marini, whom we have already mentioned as Perfetti's former patron, is said by the newspapers to have fallen a victim to the Holy Father's treatment of him within the last few weeks; and other cases of death from similar causes are recorded in the pages of Liverani and Reali.‡ The bishops, in their turn, if they cannot kill the clergy by their frowns, can deprive them on

\* Reali, 35; Italian Letter in Wordsw., i. xvi-xvii; Wordsw., i. 80; ii. 278.

† See our last Number, p. 259.

‡ Reali, 86-7; 'La Dottrina Cattol.,' 123-4.

any or on no grounds,\* and thus, by holding the terror of starvation over a miserably poor and dependent class of men, they are able to coerce and to sway them. The workings of this terror may be seen in the excuses which many poor priests make for declining to sign Passaglia's famous petition (No. 1); and by such causes, not by any real change of conviction, may probably be explained that withdrawal of some among the subscribers which the Pope has, in his Encyclical addressed to the Neapolitan archbishops and bishops in August, 1863, made a matter of boasting.

While the relations between the governments of Rome and of Italy are such as we have described, the Roman Government is charged by its own subjects with all sorts of misdemeanours. Liverani and Reali tell us of scandalous jobbing, and of something very like frauds on the public; of corruption in the administration of justice, of promotion by bribery and family interest, intrigues and jealousies between rival cliques, of rapacity on the part of cardinals and monsignori, of monopolies which fetter trade, of immoral means employed for the raising of revenue, and many other abominations which must provoke a people to discontent and revolution.† To these charges such reasoners as Mr. Maguire ‡ reply by pointing to the works undertaken by the present Pope for the embellishment of his city and its neighbourhood, and to the large assistance which is given to the people by the Church and its charitable foundations. We need hardly say that such a reply is altogether unsatisfactory—that those who are capable of working, instead of having things done for them, should be put into the way of doing for themselves; and that we can feel no admiration for the expenditure of a Government which begs throughout Latin Christendom, in order that it may have the means of increasing the superfluous splendours of Roman palaces and churches, with a view to attracting the money of foreigners whom it regards as heretics. But, be this as it may, there is the awkward question put by Liverani—How is it that, with all the advantages which the Church possesses, with all her

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\* Perfetti, 'Il Clero,' &c., 56. 'If one of these priests for some offence, perhaps merely for a reasonable discussion punished as an act of rebellion, is suspended *a divinis* by his bishop, and consequently loses the fees for masses, baptisms, marriages, benedictions, and other charges imposed on the faithful, the poor suspended priest is literally reduced to beg of the compassion of the public a piece of bread, that he may live, or rather, that he may not die of want.'—Count Tasca, in 'Anglo-Cont. Soc. Report,' p. 6.

† Mgr. Liverani has a very low opinion of Cardinal Antonelli—partly because he once heard him make a false quantity in reading a lesson at St. Mary Major's!—'Il Papato,' &c., 48.

‡ 'Rome, her Ruler and her Institutions.' London, 1857.

elements of authority and power, with all the means that she has for securing the love of the people, there should continually pass from man to man in Rome the whisper of 'Death to the priests'!\* The same writer thinks that, if the French troops were to be withdrawn, without leaving a strong army to take their place for the protection of the clergy, every priest and friar in Rome would be exterminated within a week (p. 37). D'Azeglio, on the other hand, has confidence in the magnanimity of the Romans, and points to the case of the Romagna, where, although similar forebodings had been current, the revolution was carried out without hurting a single hair on any priestly head (p. 61). We trust that this more cheerful view as to the prospects of the Roman clergy is the true one; but it cannot be pleasant for them to have their chance of life or death a matter of doubt and question.

We need hardly say that no faith is to be placed in the flattery which is habitually administered to the present Pope. How worthless it is, may be inferred from the fact that consistency is one of the virtues for which it gives him especial credit; † nor can any reliance be placed on the acclamations and the handkerchiefs which greet him in his public appearances. ‡ We may be sure that in these demonstrations there is much of baseness and much of insincerity, which only waits for an opportunity to go over to the opposite side.

As to the state of the clergy in general, there is a great deal of evidence which shows it to be very deplorable. Zaccaro, for instance, speaks of priests who have 'to live by saying mass for a franc, or to act as mutes or gravediggers at the burial-ground for a taper or half a franc' (p. 13). And Reali tells us that, while an undue proportion of the ecclesiastical revenues goes to support the grandeur and ease of prelates and 'curialists,' the poor country priests are obliged to eke out their maintenance by acting as innkeepers, coachmen, and waiters, or by engaging in petty farming (p. 118). This carries us back to the pictures of clerical life drawn by Agobard in the ninth century, or to those which were drawn by Eachard in the seventeenth century and have lately been reproduced by Lord Macaulay; but there is reason to believe that the inferior cha-

\* 'Il Papato,' &c., 72.

† See Reali, 38-9.

‡ We have the following story on good authority:—The wife of a Roman official was invited, together with her husband, to spend a certain day in the country. 'I am sorry that we cannot go,' she answered, 'because next day is the feast of San Carlo.' 'What has that to do with it?' asked her innocent English friend. 'Don't you know? The Holy Father goes in state to the church of San Carlo, and my husband must stay in Rome to get up the popular demonstration.'

racter of the Italian clergy in our day extends far beyond the class of these poor country priests.

'One of our great difficulties,' said an Italian to Dr. Wordsworth, 'is from the low origin and poverty of the clergy, and from their want of learning. They are almost all from the lower classes—peasants or small shopkeepers. The people, especially in the towns, are above their teachers in intelligence; penury makes the clergy dependent and servile, and tempts them to resort to low acts and shifts for a livelihood, or to superstitious tricks and impostures. Many of the bishops are of plebeian origin, and when raised from humble estate to high positions in the Church, they are too often the worst tyrants of all.'

The education of the clergy, instead of improving, is even becoming worse. The Church, in its jealousy of profane light, has insisted that its future ministers shall be trained, not in the universities, but in ecclesiastical seminaries only; and from these places comes forth a class of priests who are altogether without general culture, who are continually becoming more and more narrowly ecclesiastical in their opinions and prejudices, worse and worse taught even as to those departments of knowledge to which the teaching of the seminaries is confined, and fanatical in proportion to their ignorance.† The students in seminaries, and the younger clergy, are compelled to buy, to read, to believe, and even to stand examination in the 'Armonia' and the 'Civiltà Cattolica,'‡ journals which, for bigotry and unscrupulousness, may be described as the 'Record' and the 'Witness' of ultramontane Jesuitism. Under the Bourbon government of Naples, the study of Greek was forbidden in the seminary attached to the famous monastery of La Cava, where the monks, like their brother Benedictines of Monte Casino, were suspected of liberal tendencies; and, although the prohibition has now been removed,§ it does not appear that the cultivation of the language of the New Testament has yet begun. As bishops have forbidden the future clergy to attend the universities, many of the theological chairs in these have been suppressed by the Government, as having no possibility of usefulness; and we need hardly say that we agree with Reali in lamenting this suppression, although we venture to hope that it will turn out to be nothing more than a temporary suspension.||

\* i. 104-5; see also pp. 228-9 of the same volume; Reali, 120; 'Il Clero,' &c., 36-7; 'L. M. H.,' 99.

† 'Il Clero e la Società,' 57; 'L. M. H.,' 98; Wordsworth, i. 83-6; see, too, Hirscher, ed. Coxe, 138.

‡ Reali, 83.

§ 'L. M. H.,' 48.

|| Reali, 71-2; see Hirscher, 138; 'L. M. H.,' 101.

With a view to raising the character of the clergy, Passaglia proposed in the Turin Parliament, that no person should be admitted to Holy Orders unless he had been trained at some university, or had passed through certain 'examinations,' which would serve as a sufficient test of his having received a liberal education; but, as we have already said, the bill which contained this provision was unsuccessful.\* Almost the only learning among the clergy is said to be that of the Jesuits; and the members of that Order are generally suspected—not, indeed, on account of the slippery casuistry which drew on them the satire of Pascal (for this is said to have been given up since their restoration by Pius VII.), but for their spirit of intrigue, their restlessness and unscrupulousness in endeavouring to gain influence, their desire to make it believed that their own writings are the only pure fountains of orthodoxy, their bitter and persecuting jealousy of all who will not bow down to them.† The false and degrading fashions of devotion which they spread among the weaker and more ignorant of those who listen to them (including men and women of the highest ranks, whose training from their earliest days is usually carried on under Jesuitical influence‡), the gross superstitions which are inculcated on the people, the trumpery mechanism which is imposed on them as a system of practical religion, arouse the frequent wrath of the Italian writers, although we need hardly say that they regard these as mere corruptions, which may be removed without touching the essence of that Roman faith which they profess to hold.§

Instances of superstition, indeed, are everywhere to be seen by every traveller in Italy. Within the last few weeks we have read of a winking image somewhere near Tivoli, and of an exposure which resulted from a quarrel about the profits of the exhibition, between the monks who managed the trick and the bishop who patronised it. Prophecies, too, have been occasionally tried of late years in the interest of the Papacy; but unluckily they have not come true.|| And, as might be expected, when such instructors and such fashions of

\* 'La Pace,' April 29, 1863.

† See Cardinal d'Andrea's Letter in 'La Curia Romana e i Gesuiti.' Certain charges were brought by the Archbishop of Bruges against some Louvain professors, and were urged on by the influence of the celebrated Jesuit Perrone. The matter was carefully examined by the Congregation of the Index, under the presidency of Cardinal d'Andrea, and eventually the professors were declared to be orthodox. Father Perrone then endeavoured to get the matter transferred to the Inquisition; and Cardinal d'Andrea, in disgust, resigned his office in the Congregation of the Index.

‡ 'La Rinascentza,' c. xvi; Reali, 70-1.

§ Perfetti, 19-20.

|| 'Il Papato,' &c., 237.

religion have their sway, there is both in the clergy and in the laity a deplorable want of acquaintance with the real source of religious truth. 'The Bible,' says Perfetti, after having laid down the patristic and ecclesiastical principles for the interpretation of it, 'is unknown by the Catholic populations, unknown by the devout no less than by the indifferent. . . . The priest has found it easier to substitute himself for the Bible than to edify himself together with his flock, by means of the Bible.'\*

'If,' writes Reali, 'there is in Italy one book which is less sought after, less read, and less valued than others, it is certainly the Book of God, in which is contained so great a treasure of heavenly wisdom. . . . Between the clergy and the laity there is a division of studies; but this can assuredly not be averred with regard to Scriptural studies, which are with both classes alike something unknown: the clergy, for a long time back, knowing only so much of the Bible as is read in their breviaries, have substituted for it the books compiled by Jesuits; the laity, seeing that it was not valued by the clergy, have themselves also joined in despising it.'—pp. 68-9.

The monastic orders have in general fallen even lower than the secular clergy.† The abolition of these orders is said to have been really a matter of necessity in the Romagna, where they had sunk so deeply that any restoration of them to general respect was hopeless; and we have seen how Mamiani proposes to deal with those of Rome.

We cannot wonder that the clergy whose training we have described, and by whom such a system of religion is taught, should have lost their hold on the intelligence of their countrymen. Perfetti pathetically laments that, although our modern civilisation is essentially of Christian origin, it is not religious; that, although deeply marked with the results of the Gospel, it does not in practice acknowledge the Gospel itself; that it has derived from it morality, but not a spirit of faith or love. 'Society,' says this writer, 'now lives on the fruits of the Gospel, but the tree itself is hidden on a height which we do not climb; we are rich with a wealth of which we have lost the title-deeds; everywhere we find the corollaries of religious truths, but the propositions from which these corollaries are deduced have been forgotten.‡ And, after a glowing description of some bright exceptions to the general irreligion—'religious and devout souls, hearts whose life was Christ,'—he tells us that, whenever he has asked any of these saintly persons by what means he had been brought to the Saviour and to peace,

"one has pointed out to me the Bible, another has spoken to me

\* 'Il Clero,' &c., 42-3.

† See Reali.

‡ 'Il Papato,' &c., 15.

of the tradition which is preserved in the writings of the Fathers, another has pointed to the heavens, another has repeated to me, like the mystic, in his simplicity, *Via crucis via lucis*; but hardly any one has indicated to me the priest, or else the priest himself was one who had attained to the truth by these same ways.\*

To this quotation we must add an extract from the 'English Churchman's' account of his interview with the author. On his speaking of this description of the 'faithful souls,' Perfetti

'burst into tears, and exclaimed, "Alas! few of these were my own countrymen; they were almost all strangers and foreigners, with whom I was brought into contact from time to time, during my twenty years' life and work in Rome."—'L. M. H.,' 53-4.

The policy of the Papal Court in declaring itself irreconcilably hostile to Italian liberty and unity, has naturally alienated multitudes not only from Rome, but from religion altogether, which they mistakenly identify with the Papacy. The conduct of the Roman Court, says d'Azeglio, has been such that it 'could not fail to confirm unbelievers in the opinion that Catholicism is about to perish' (57); and we hear of a great decay of religion, of reverence for it, and of respect for ecclesiastical authority.† The long vacancies in bishoprics and archbishoprics, by depriving the people of spiritual superintendence, and by exposing before them unseemly differences among those who ought to be their patterns, have told very seriously on religion and on morals.‡ Indifference is spreading rapidly and widely; § and it is only too natural that, in very many Italians, disgust at the corruptions of Roman religion, at the political and spiritual tyranny which Rome exercises and abets, at the grossness, the ignorance, and in some cases the immorality of the clergy, may produce a disposition to receive that infidel teaching, which some who engage their political sympathies are but too ready to urge on them. Where there is no other alternative than Romanism, infidelity will assuredly spread.

'Alas!' writes Passaglia, 'a great part of the Italians have already long since become sceptical and indifferent to religion; and not by means of Protestantism, though from the same reasons as those which at former periods favoured the diffusion of Protestant principles in Europe, namely, from the indecent confusion of things sacred and profane in which the Court of Rome so obstinately persists, and also from the superstitions which are attempted to be imposed for the justification of abuses which true religion cannot tolerate. For one must

\* 'Il Papato,' &c., p. 18; comp. pp. 30-1.  
 † 'Il Papato,' &c., p. 175, 233; Italian Letter, ib. xvii.  
 ‡ 'Il Papato,' &c., 9.  
 § 'Il Papato,' &c., 9.  
 renounce



renounce common sense or honesty to undertake to deny [affirm?] that false miracles do not bring discredit on the true ones, or that exaggerations in worship do not expose worship to ridicule, or that proclaiming Heaven's intervention to support tyranny does not lead to the conclusion that God's influence in human affairs is but a priestly invention; that to make the confessional the means for exciting civil revolt and military desertion, does not repel the masses from that salutary means of conversion; or that to turn the pulpit into a chair for advocating the temporal interests of a court the very name of which denotes the quintessence of worldliness, and into an engine for invoking curses on political dissentients, does not keep away from the House of God all except the fanatical and the bigoted.\*

It is one remarkable piece of evidence as to the degree in which the Church of Rome has lost its hold on the Italian mind, that, while there are about 500 journals in Italy, the 'Armonia' can claim only 28 of them as 'Catholic;' that the subscriptions to these are in great part compulsory; and that, even with such artificial support, the papers cannot pay their expenses.†

The most remarkable demonstration on the part of those ecclesiastics who object to the policy of the Roman Court, is Passaglia's Petition to the Pope, imploring him to restore peace to the Church and to Italy by resigning his temporal sovereignty. To this document the names of upwards of nine thousand priests were attached—a formidable proportion of the whole clergy of the Italian kingdom; for no signatures were admitted from the Papal or the Austrian territories. Among the subscribers were many persons of high ecclesiastical position;‡ and we need hardly say that there must have been multitudes among the clergy who felt with the petitioners, but were not inclined to brave the dangers of joining with them in their act. This movement drew forth from some Roman authority a declaration that Passaglia and his accomplices had, by the laws of the Church, incurred the sentence of excommunication. He replied by a pamphlet 'On Excommunication,' in which, with much learning, he shows that his offence was not of a kind to which that spiritual penalty could be rightly applied; and in the Turin Parliament, on the 23rd of April last, he thus referred to the matter—speaking, we are told, *con impeto*, and exciting, by his words, the enthusiastic applause both of the members and of the hearers in the galleries:—

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\* 'Colonial Church Chronicle,' p. 72; see, too, 'The American Church Review,' p. 263.

† 'La Pace,' Jan. 1, 1863. Some curious statistics as to the press in Roman Catholic and in Protestant Germany may be found in Mr. Coxe's (American) 'Churchman's Almanac' for 1863, pp. 82-3.

‡ See the analysis of the signatures, 'Petizione,' 172, 181-2.

'We of the liberal clergy, it is said, by our opposition to Rome and to the episcopate, have lost all efficacy, being struck with suspension and bound with an excommunication.

'But, gentlemen, who has told you that we are suspended, that we are excommunicate? We are excommunicated by that same tribunal, by that same authority, by which you, too, are excommunicated. (*Bravo! hear!*) We are, then, excommunicates among excommunicates. But, gentlemen, neither are you excommunicate, nor am I. (*Hear.*) It is not man that excommunicates, but Christ, through Peter; but from Rome it is not Peter that has spoken, it is man! — 'La Pace,' Apr. 29.

Other petitions of like tendency had been set on foot in various parts of Italy, but were eventually merged in that of Passaglia;\* and in several quarters associations of the liberal clergy have been formed. That of Florence, of which Canon Ricasoli was a leading member, was put down by the Archbishop.† The Vicar-capitular of Milan has repeatedly denounced and threatened the 'Ecclesiastical Society' of that city, simply, as it would seem, from a dread of any association among the clergy, as the objects and the rules of this body appear to have been altogether harmless and praiseworthy.‡

At Naples, the 'Clerico-liberal Association' had for its organ a newspaper called the 'Colonna di Fuoco,' and enjoyed the patronage of some bishops, especially of Mgr. Caputo, Bishop of Ariano, who, as Chaplain-General of the Army and Navy of the Kingdom, was able to give its members facilities for preaching when forbidden to enter the pulpits of some churches. But Bishop Caputo died in September, 1862, when an ultramontane paper announced with savage triumph that 'God has summoned him to Himself, to give an account of his apostacy, and has suffered him to die without retracting his errors.'§ Soon after this, sixty-eight Neapolitan Bishops put forth a manifesto denouncing the Association and its newspaper; and the 'Colonna di Fuoco,' after having published some vigorous articles in reply to this denunciation, announced its own dissolution in November last.|| Although other societies and other journals have since started up at Naples, we gather that the place of the original Association and of the 'Pillar of Fire' has not been yet fully supplied. The

\* 'Petizione,' 188.

† Wordsworth, i. 201-2.

‡ See Wordsworth, i. 82-6.

§ 'Le Monde,' quoted in 'Amer. Ch. Rev.,' 264.

|| 'L. M. H.,' 43-4. The articles in question are republished by Don L. Zaccaro, who was editor of the 'Colonna,' in the pamphlet entitled 'L'Episcopato Italiano,' &c.

newspapers inform us that the Pope has very lately denounced with great vehemence all societies of the kind, and that everything that savours of liberality at Naples—including the permission to build an English church—has been condemned in a violent letter from the Cardinal-Archbishop Riario Sforza, whose political opinions render Rome a safer and more congenial place of residence for him than his own city.

The proceedings of the Roman Court show a determination to crush any one who may venture to express an opinion different from that of the dominant party. It is not for advocating any reform in doctrine—it is not for holding any opinion short of the highest as to the spiritual supremacy of the Pope—that Passaglia is a banished man, suspended from preaching and from the performance of divine offices, and declared to have incurred, with all who adhere to him, the penalty of excommunication. His offence consists in having advised the cession of the Pope's temporal sovereignty, as a means towards the firmer establishment of his spiritual power. For at Rome the temporal sovereignty, (contrary to the evidence of history, as Passaglia and others have abundantly proved), is regarded as bound up with the very essence of the Papacy; and it is felt that, when this temporal sovereignty is assailed, no profession of the most zealous attachment to the Roman system of doctrines can be relied on as an assurance of the assailant's fidelity in time to come. And when once any show of doubt has been made, there is an endeavour to drive the questioner into alliances which may throw discredit on his cause, and into excesses which may not only arouse a prejudice against himself, but, like the excesses of other men in times past, may serve hereafter to point morals as to the danger of departing from the system of Rome, even in things which may seem remote from any question as to faith.

While we believe Passaglia and others to be perfectly sincere in their declarations that they desire no other reforms than those which have been mentioned, we yet agree with the Roman party in thinking that these divines must go further. If they were to stop at their present convictions and wishes, the case would be contrary to all experience. It is curious to see how, while professing the deepest submission to the Papacy, they are careful to limit that power in every way that they can. They are well up in everything that has ever been said against any part of the Roman system by writers whom the Roman Church professes to regard as authorities. They quote St. Augustine's words against wholesale excommunication just as these words were quoted by the Imperialists of the eleventh and twelfth

centuries against Gregory VII. and his followers. They are never weary of citing St. Bernard's complaints against the corruptions of the Roman Court from his book 'To Pope Eugenius, on Consideration.' They are fond of Gerson and Melchior Canus, and other writers of former days, who endeavoured to clip the wings of the Papacy by denying the personal authority of the Pope. They are skilful in all the distinctions which such writers have drawn between the Papacy in itself and the Papacy as representing the universal Church—between the Pope alone and the Pope with a Council to back him. They are careful to limit the range of subjects to which the authority of St. Peter's successors extends. 'It is not Christ's vicar, but man, that has spoken from Rome,' says Passaglia, in a passage which we have already quoted. 'Yes!' he said, 'with emphasis' (*con forza*) in the same debate, 'we are too small to examine and to overlook the Church, in so far as it is a church; but to examine and to overlook the churchmen, who do not speak or act as churchmen, but speak and act as men,—in this case we are men against men, and there is no disparity.\* We expect, then, that even this section of the liberal clergy will ere long move further; and in other cases there has already been an advance considerably beyond the Passagian position. The 'Colonna di Fuoco' was gradually led on, and there is reason to believe that those who were concerned in it have since moved further in the same direction.† Within the last few months was issued the prospectus of a new journal, 'La Chiesa e l'Italia,' which professed to have for its object 'the revival of faith in the hearts of Italians who find themselves in disagreement with the head of their Church.' Free discussion was to be allowed in its pages, and it was to be in connexion with a Society 'for reclaiming the primitive Catholic rights of the Italian clergy and laity.' The programme of this Society embraced four points:—

1. To promote the reading of the Bible in the vernacular.‡
2. To work towards the use of the vernacular in the Liturgy.
3. To reclaim the rights of diocesan and metropolitan bishops, and the rights of the laity in episcopal elections and in synods.
4. To obtain the removal of the laws which enforce celibacy on the clergy.§

These

\* 'La Pace,' May 5, p. 420, col. 1.

† See Zaccaro, 12; 'Amer. Ch. Rev.,' 261; 'L. M. H.,' 28.

‡ We regret that we have not seen a work which is very highly spoken of—'La Secularizzazione della Bibbia,' by Monsignor Tiboni, of Brescia, who has also published some lectures against the Papal claims to infallibility.

§ A bill for the marriage of the clergy was brought into the Turin Parliament. Passaglia's only objection was that such a measure would be more properly treated in

These and other reforms had been mentioned fourteen years ago by Dr. von Hirscher,\* Dean of Freiburg in the Breisgau, as necessary for the Roman Catholic Church of Southern Germany; and although his movement was suppressed by Rome, there is abundant reason for believing that there is a wide feeling of sympathy with his views of reform both in Germany and in Italy. His little work, known in England through Mr. Cleveland Coxe's translation, has lately been rendered into Italian by Count Tasca, and has, we are told, been eagerly read by many Italians. 'Let us once get Rome,' said a "celebrated Italian advocate" to Dr. Wordsworth, 'and then all the questions which were agitated at your English Reformation in the sixteenth century will come upon us. Yes, flow in upon us in a torrent, before we are prepared for them' (i. 227). But, however the question as to the possession of Rome may be settled, we are convinced that the movement which has been begun must go on; and it is important to all who value Christian unity, or even who care for Christian faith, that this movement should, if possible, be wisely moderated and directed.

We cannot be surprised to find that some zealous Protestant communities have endeavoured to take advantage of the present circumstances of Italy for the propagation of their own opinions. The Vaudois have established congregations in Turin, Florence, and elsewhere, and our own country has contributed missionaries from the Plymouth Brethren and from the Free Kirk of Scotland. Of these efforts we must say something, but shall not say much. It is one thing to sympathise with the Vaudois in their struggles for the preservation of their hereditary faith within their own valleys, but it is another and a widely different thing to sympathise and to co-operate with them when they come forth from their valleys for the purpose of converting a nation to their system.† And that system appears to us altogether unfit for the work. It may find here and there in individuals that character of mind to which it naturally recommends itself, but it can have no attractions for the great mass of such a people as the Italians

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in an ecclesiastical assembly, and, if approved there, might be brought to the Parliament for its sanction. Wordsworth, i. 169, 170.

\* 'Sympathies of the Continent,' 181, seqq.

† We are surprised to find in a book by a writer of Dr. Wordsworth's reputation the popular and sentimental account of the origin of the Vaudois, which derives them from Claudius of Turin in the ninth century, and supposes their name, *Waldenses*, to be formed from *Vallis*, not from that of Peter *Waldo* (i. 258-9). In another place (i. 163), where Dr. Wordsworth professes to give the history of St. Bruno's conversion (without showing any suspicion of its truth) which has been long ago exploded by Launoy and others, he seems to have mixed up with it some circumstances of the story of Peter *Waldo*.

—trained

—trained in a historical religion, with a graduated hierarchy, a high doctrine of sacramental grace, and all the varied influences of ritual and ceremonial splendour. And these objections hold yet more strongly against the Plymouth and the Free Kirk movements, which have not in their favour that community of race between the teachers and those whom they address which might in some degree recommend the Vaudois to their Italian brethren.\* Indeed there is reason to fear that much harm has already been done in Italy by the proceedings of unwise propagandists. Dr. Wordsworth tells us, for instance, of an English clergyman who went to Rome in order to circulate tracts among the bishops assembled for the Japanese canonization. He was treated wisely, as well as with much forbearance, by the Roman authorities, who sent him quietly away, paid the rent of his lodgings, and gave him a compensation for his confiscated tracts. Dr. Wordsworth heard of this clergyman in the Vaudois congregation at Florence, where it was announced from the pulpit that he would deliver an address in the course of the following week (i. 302); so that the poor man may have the comfort of knowing that he has done his best to make our Church ridiculous in the eyes of Italian Protestants as well as Romanists. We have heard privately of other foolish doings in the same line, which it is needless to drag into the light; but there have also been displays of something worse than mere foolish enthusiasm; for it is stated that some of those who have seceded from the Roman Church have fallen into 'the denial of all notion of a ministry, the hesitating to pray to the Holy Ghost, and the merest antinomianism.'† Such excesses as these cannot but tend very strongly to throw discredit on the movement out of which they have sprung. Indeed, while we sincerely wish to give all due credit to the benevolent intentions and zeal of the persons concerned in the attempts which we have been speaking of, it may be questioned whether the result of these irregular exertions can be regarded as in any way good. On this point we may quote a passage which, although somewhat pedantic in expression, is very sound and true in substance, from an instructive article in the 'American Church Review' for July, 1863:—

'The fundamental facts—no matter whether right or wrong—to be accepted as facts by the missionary of a pure faith, in dealing with the Italian character, are these: the Italian mind will not apprehend as positive a purely subjective religion; the negative and destructive part only of such a work can be successful. They may receive theo-

\* 'American Church Rev.,' 270.

† 'Colonial Church Chron.,' 53.  
logical

logical doctrines in the abstract as philosophic truths; but *inorganic* Christianity, as a real and practical power grounded in the intellect, vitalised by the affections, and fruitful in the life, is, as a rule, an impossibility in Italy. There, Christian worship means a priesthood, sacraments, a liturgy: the church of Christ is a visible church, an organised institution, administered by an order solemnly set apart for the service of the Sanctuary, governed by a hierarchy consecrated to this holy function by Divine authority; it is, in fine, a historic church; in Italy, it is *their* historic church. To reject that church is to reject the Church of Christ, to reject religion itself as a religion, however some of its dogmas be retained as speculative truths.'—268-9.

The opinion here expressed as to the unfitness of a naked Protestantism for Italy (and such is the only kind of Protestantism which Italians in general have any knowledge or conception of) might be abundantly confirmed from other authorities;\* and the American reviewer tells us that some excellent persons, whose feelings and expectations were all the other way, have been convinced by experience of 'the impracticability of securing general or permanent reformation on the principle of an entire rejection of every feature of their former Church' (p. 243). Moreover, in addition to theological prepossessions there is, as a distinguished layman<sup>†</sup> at Turin told Dr. Wordsworth, a jealous feeling of nationality, which must not be lightly offended:—

'The Italians,' he said, 'are excessively sensitive in this matter; they are influenced by national pride to such a degree that they imagine that there is scarcely anything good which is not of Italian growth; and that Italy has no need of learning from any other country, but has a prescriptive right, even from the time of her Ciceros and Virgils, to be the teacher of the world. Therefore the course of all wise reformers will be to show to the people of Italy that genuine reformation is a restoration of Italian church polity; that is not an exotic, but of indigenous growth; and then there is some hope that it may be accepted in Italy,—but not otherwise.'—i. 275-6.

In so far, then, as any proselytism is concerned which would aim at drawing over individuals from Rome—at breaking the ties which bind them to the history of the past, and to the outward communion of a hierarchical Church—we think it well to keep aloof from the Italian movements. But yet there is a part which it seems to us that English Churchmen may properly take in the present state of Italy,—simply by making the principles of our own

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\* e. g. Azeglio, 55; Reali, 5-6; Wordsworth, i. 172; *Italian Letter*, ib. xxiv; Zaccaro, 11; 'L. M. H.', 61-2, 65, seqq.

Church known to persons who are likely to influence the opinion of the Italians, and, above all, to such of the Italian clergy as are willing to receive information. Of the gross darkness which prevails all over the European continent as to what the English Church really is, every one who has conversed with foreigners, or has read foreign books in which the subject is mentioned (in whatever interest they may be written), can furnish ample and laughable proof; and it is certain that the reports which are spread abroad by converts from our own Church to Rome, are not likely to set matters in a truer light.\* To remove this misunderstanding is the object of the 'Anglo-Continental Society,' which has now been labouring for some years with zeal and discretion, although with very limited means, to promote the translation and circulation of such works as are suited to give a more correct idea of Anglican doctrine and practice. The purpose of its operations in Italy (to which much of its attention has been directed) is declared to be 'to raise up a spirit of reform within the bosom of the Italian Church, which may eventuate in a national reform of the whole Church of Italy, carried out by the authorities in State and Church; not to establish a new Church, nor to draw individuals out of the Italian Church into separate communities, but to help forward the internal reformation of the Italian Church by the instructed mind of the Church.'† The Society for Promoting Christian Knowledge has also given powerful aid towards the object of making known the principles of our Church by publishing an Italian translation of the Prayer-Book, and by liberally supplying copies of this for distribution or for sale at a low price:—‡

'During this last winter,' says the churchman whom we cite as "L. M. H.," 'I could not but feel thankful to see that the seed thus sown was, in several instances, manifestly yielding good fruit, in increase of sympathy with the Reformed Episcopal Church, in the removal of misapprehensions, and in the promotion of a desire for analogous reforms in the Church in Italy.'—p. 29.

And the same writer tells us of the effect on a parish-priest in the neighbourhood of Naples, with whom he is well acquainted:—

'Last year, he was greatly interested in our Prayer-Book and in

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\* See Wordsworth, ii. 63.

† 'Report' (No. 22) p. 1. Information as to this Society may be obtained by application to the secretaries—the Rev. F. Meyrick, Palace Plain, Norwich, and the Rev. Dr. Godfray, Beau Séjour, Jersey.

‡ See the Report of the S. P. C. K. for 1861, p. 85.



**Jewel's Apology.** (The Latin edition has frequently told well upon priests.) . . . . *This* year, I was thankful to find, in his case, as in others, that increased knowledge of the real character of the Reformed Episcopal Church manifestly led to increased sympathy with us, and desire for analogous reforms in the Church of Italy. . . . He gladly joined with us in short morning and evening prayers, in which the Italian version of our Prayer-Book happily enabled us to unite, reading alternately the Psalms for the day, with a Lesson and a portion of the prayers. He said afterwards, "If we could but have our church services in our own tongue, and could have this intelligible reading of the Psalms by priests and people, and the Scriptures read out in our own tongue, in the reverent way that seems habitual to English church-people, the face of things would be wholly changed in our churches. Now, unhappily, our people too often come in and out, chatting and laughing, not heeding the service; and when we complain, they say, "It is in Latin, and we cannot understand."—pp. 45-6.

Count Tasca, a nobleman whose services in contributing to the religious enlightenment of his countrymen are above all praise,\* spoke as follows to Dr. Wordsworth:—

'I lent a copy of [the Italian translation of the Prayer-Book] to a priest who used to rail against England as a land of schismatics, heretics, and infidels; and he confessed to me that the Litany in that book was the most beautiful form of prayer he had ever seen. . . . After the battles of Magenta and Solferino I was entrusted with the superintendence of the military hospitals. . . . I translated many of the collects and prayers of the English Prayer-Book into various languages, and put them into the hands of the soldiers on their sick beds. Almost all accepted and used them, and expressed the great comfort they found in them. Some of the Roman Catholic clergy and bishops who visited the hospitals were delighted with them, and I was warmly thanked for what I had done. . . . At last, however, it was discovered that they were translated from the English Prayer-Book, and then one of the bishops in my neighbourhood denounced them as heretical.'—i. 103-4.

Again, let us hear 'Father Felix,' a Sicilian by birth, of whom more will be said hereafter:—

'It is indeed a great pity that the real principles and the true doctrines of the Church of England are so little known to the communions which differ from her. It is my firm persuasion that, if the Church of England were presented in its true colours, and its tenets simply expounded, it could not fail to strike the mind of every sensible Christian. A fair statement of her doctrines would confer an immense benefit on her sister churches on the Continent. They know what the Church of England is *not*—that she is not Tridentine;

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\* See the 'American Church Rev.,' 249, seqq., and Anglo-Cont. Soc. Report, pp. 2-9.

but they do not know what she really is—Scriptural and primitive.’—i. 98.\*

Other passages to the same effect might be quoted in abundance;† but we shall content ourselves with one more:—

‘An excellent English clergyman, a friend of ours, was spending a few days last Lent with the Benedictines of Monte Casino: he found several of the Fathers interested about our Prayer-Book; they came more than once to his room to talk with him about it; and at their request, he left his Italian copy with them. One day he asked one of these good men, “Do you think that your and our branches of the Church will ever be reunited?” “Yes, I do,” replied the Benedictine, “though neither you nor I will live to see that day; but,” he added, “meantime remember that what you of the Church of England can best do to promote reunion of the Church is, not to join us, but to help us in our attempts to purify ourselves.”’—‘L. M. H.,’ 49-50.

The work which we would recommend is not proselytism, nor is it chargeable with that ‘insular’ and exclusive character which foreigners very commonly impute to our ideas, ‘as if this little isle had been created to serve as a model for the universe.’‡ For in the first place, our Prayer-Book is not ‘insular’ in its origin, as is known to all who have looked into its history; and this will be clear at a glance to the Roman Catholic Clergy, when the opportunity of comparing it with the forms of their own Church is afforded by the Latin Prayer-Book, which Dr. Jacobson is to edit for the Anglo-Continental Society.§ But, further, our object in putting before the Italians our Prayer-Book, and such other books as may enable them to understand our Church, is not to reduce them exactly to our model, not to impose an Anglican reformation on them (for this we know that they will not accept), but to place within their reach such helps as we have to offer in order to their reforming themselves. It is by acting in this spirit that we may expect the Italians to meet us. ‘Great good may be done,’ said one who is described as ‘an ecclesiastical dignitary, well known as a scholar and theologian,’ ‘in the present condition of Italy, by disseminating accurate information respecting the Reformed Episcopal Church. We shall never become Anglicans, but we may be helped by your experience in our own national reforms’ (Anglo-Cont. Rep. p. 20.) And this is all that we need hope or wish for. Let the Italians take more or less from us—let them, if they please,

\* For the effect of the English Prayer-Book on this writer, while yet a priest of the Roman communion, see pp. 12-14 of the pamphlet (No. 22).

† See Anglo-Cont. Rep. p. 21; Wordsworth, p. 23.

‡ Beyle-Stendhal, ‘Promenades dans Rome.’

§ As to the desirableness of such a publication, see Wordsworth, i. 191.

make more of the Roman Bishop's dignity than we should do, provided that they stop short of a spiritual supremacy—let them settle the relations of Church and State on a different footing from our settlement—let them have as much more of ceremonial than is usual among us as may suit their national character, so that the substance of religion be not sacrificed to its form and outward show—let them even differ from us on many doctrines, provided that these be not of the essence of Christian faith—in all this the principles of the English Church would teach us to see no cause for a breach of unity, or for a want of perfect charity and brotherly feeling towards them.\* And we rejoice to know that any reformation which may take place in Italy will be able from the first to profit by lessons which in our own country were not learnt until after a long and painful experience—that the Italians will have from the very beginning of such a reformation the advantage of understanding the rights of conscience, the impossibility of enforcing religious belief, the sinfulness and the miserable fruitlessness of attempting to make men think as their rulers think, by compelling them to outward conformity.

As to the reforms which are needed in the Italian Church, while we believe that they ought to reach, and eventually must reach, much further than to matters of discipline, it is clearly with these that they must begin. All witnesses concur in telling us that, while the Italians are ready for questions of this class, which they have felt pressing on them, they are not yet ripe for the discussion of theological doctrine.† To such questions are addressed a series of learned letters, which have lately appeared at Turin, and are published in English in the '*Colonial Church Chronicle*.' The first of the series are those 'from a Dignitary to a Statesman,' on the appointment of bishops (No. 16); and these have already been followed by letters on the celibacy of the clergy, the use of the vernacular language in Church-service, the administration of the Eucharist in both kinds, the extent of the Roman Patriarchate in ancient times, &c. The argument in these papers is mainly historical, and, as the Italians have always been taught to rely on history and tradition, no better way can apparently be found to their convictions than by showing them what history and tradition really teach. And this will apparently be among the chief objects of a newspaper which is now projected, and for which the support of able writers

\* The difference between the objects of English churchmen and those of 'the so-called Protestant propagandism' is well appreciated and defined by Count Tasca in a passage quoted by the *American Reviewer*, p. 252.

† See e. g. Wordsworth, i. 250, 291; ii. 255, 275, &c.

both here and in Italy is said to be engaged. This paper takes its stand on the same points of practical reform which we have already mentioned in connexion with the project of '*La Chiesa e l'Italia*;' and the prospectus of it promises that the subjects of controversy shall be discussed in a 'candid, courteous, and conciliatory tone,' after the manner of a periodical which was published for some years at Dublin under the title of "*The Catholic Layman*." That such a tone—a tone wholly unlike that of the many publications which have been sent forth by the more violent reformers of Italy\*—is the only one from which real good can be expected, we need not take the trouble to argue. But it seems worth while to cite here a recent case in which, although the scene was in the heart of India, the actor and narrator was by birth a Neapolitan subject, and therefore one whose evidence may be especially valuable as to the best way of approaching the Italian mind.

'Father Felix,' a Sicilian Capuchin whose family name is Miritello, having gone to India as a missionary, with the usual prejudices of his country and his class against Protestantism of every kind, found himself disturbed by the Papal decree in favour of the Immaculate Conception; for, although he held this doctrine as matter of opinion, he was startled at its being erected into an article of necessary faith. After much uneasiness, he asked the English chaplain at the station where he was, to lend him some books on the controversy between the Churches, and received from him Jeremy Taylor's '*Dissuasive from Popery*,' and Professor Harold Browne's well-known and excellent '*Exposition of the XXXIX Articles*:'—

'When I went home, I felt a kind of uneasiness in opening the books; however, I prayed to God for light, and took in hand Jeremy Taylor. The very title-page indisposed me; I felt that it was too bad to call my religion popery, and read it with suspicion. I went on reading, but I found that there was generally in it a kind of misrepresentation—I should say exaggeration—of some points of the Roman doctrines; and I felt that it was not fair to charge the adversary with consequences drawn from an exaggeration of his principles. So I stopped reading, and would have thrown away the book, had it been my own. I thought that nothing could be derived from reading Protestant books; "for," I said, "truth has no need of misrepresentation;" and I regretted having asked for the books at all. . . . But [after two days] happening to open Professor Browne's work, and to read a portion, I find him so fair in representing the doctrines of the Roman Church, so faithful and guarded in his expressions, remaining a step behind rather than in advance of the

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\* See Wordsworth, i. 247; '*L. M. H.*,' 69.

truth, that it conciliated my mind and my heart. . . . What was more, I found each point strengthened by the authority of the Fathers.'—pp. 23-4.

This, which was contrary to all his expectations, raised the suspicion that the patristic quotations might have been falsified; but at Agra Father Felix found the means of satisfying himself on this head, and, after a time, having on full conviction made up his mind to leave the Roman Church, he was received into communion by the Bishop of Calcutta, and is now a missionary of our own Society for the Propagation of the Gospel. The effect of the two styles of controversy on his mind (not that Bishop Taylor is at all to be classed with the extreme opponents of Rome) may read a lesson to all who take part in the discussion of religious questions.

One reform there is which is necessary in Italy before all others—we mean a reform in the English Church. The aspect in which our Church shows itself in that country is generally anything but attractive. At Rome, indeed, while the Papal Government compels us to worship without the walls, and in a building which must bear no outward sign of an ecclesiastical character, there is full provision of frequent services and administration of the means of grace; and how highly this ought to be valued in a city where Romanism puts forth all its fascinations—where anything short of the full Anglican system would afford an opening for contrasts to the disadvantage of our own Church—we need not say. At Genoa, Dr. Wordsworth was much pleased with the service, and the excellent chaplain, Mr. Strettell, is now raising funds for the building of a church. At Milan, a little church has been given up by Government for the use of the English. But in one great Italian city, admission to the English service is only to be had by paying a franc and a half for a ticket; and, lest the buyer should get too much for his money, a printed code of regulations explains that this ticket, although nominally good for a 'week,' will not clear him for anything more than the Sunday of those few weeks in which there is any service on a week-day. In another great city, we were assured that the chaplain had mixed himself up with a 'revival' in which all sorts of sects took part, and the chief performer was a highly excited footman! Dr. Wordsworth expresses a belief that in Italy more of English money is spent on the Vaudois than on the English Church (ii. 248); and both in this and in many other respects, there must be a very great change, if we do not wish our representations of our Church's character to be contradicted by the discreditable appearance which it too commonly presents in Italy.

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Perhaps this article may suggest to some of the many Englishmen, who at this season begin their southward flight, lines of inquiry and exertion which they might not have otherwise thought of. As to the limits within which active efforts in the cause of Italian reformation ought to be confined, we have spoken too plainly to be misunderstood; so that nobody can draw from our words any encouragement to insult or wantonly to interfere with the religion of the country, or to engage in any attempts at proselytism. But without anything of this kind—and even if he be not ready or willing, like the doughty polemic of Westminster, to engage in a theological tilt with everybody that he meets, an English traveller in Italy, who turns his attention to the religious condition of the country, may be able to learn much, and even to teach something. If he take care to ascertain well what is to be done, and in how far he himself is fitted to take a part in doing it, he may help in his degree towards the purification of the Italian Church and the promotion of Christian unity.\*

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ART. VII.—*History of England. Reign of Elizabeth.* Vols. 1 and 2. By James Anthony Froude. London, 1863.

WE hasten to introduce to our readers these remarkable volumes, which shed new light—at times startling and surprising light—on the annals of Elizabeth, that most important and critical epoch in the history of the world, especially in the history of England. They promise, if the continuation shall answer to the singular revelations of the first part, not less curious and instructive illustrations of the whole reign of our Virgin Queen. Often as this region has been traversed, beaten as it might seem into a dull and barren way by novelist, by poet, and by historian, it seems almost a new and unexplored country. We cannot say that the mists of intrigue and counter-intrigue are entirely dispersed, that the striking characters, conflicting with each other, conflicting with themselves, stand out quite clearly and distinctly; that some new perplexities do not arise; yet, on the whole, the times are developed before us more vividly and intelligibly than in any former history. We seem to know Philip, and Elizabeth, and Mary of Scotland, and Cecil, and Leicester, and Randolph, and Maitland, and Darnley, and Both-

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\* The influence of education is an important element in the religious prospects of Italy. We regret that we cannot find room for any details or remarks on this subject, and must content ourselves with referring to Dr. Wordsworth's volumes, especially to the 'English Churchman's' Letter, pp. 71, seqq.

well more intimately than ever before, while some new actors, especially the three successive Spanish ambassadors, come forth with bolder and more unexpected prominence. Mr. Froude has not taken up the gauntlet and challenged all comers in defence of the daughter of Henry VIII. In the two first volumes of his *History* he sowed his wild oats of paradox. To Elizabeth's nobler qualities—and with noble qualities she was endowed beyond most women, most queens—he does, when his work is carefully and calmly examined, full, not more than full, justice; but there is no disguise, no reticence, no timid and partial uplifting of the veil over her weaknesses, and weaknesses there were both in the Queen and in the woman which might almost justify those whom political or religious passions induce to take the darker view of her character. Mr. Froude might seem determined to show that Elizabeth was the legitimate daughter both of Henry VIII. and of poor Ann Boleyn; of Henry not in outward feature and form alone, but in the more living lineaments of character and of passions; not only in the commanding presence, the 'lion port,' the haughtiness, the force, the determined will, the despotic strength, in him hardly controlled, in Elizabeth under the strong control of her own wisdom, of the rising freedom of her subjects at home, and the turbulent and intricate state of public affairs abroad—so too in the vanity, the coquetry (we believe no worse either of Elizabeth or Anne Boleyn) of her mother. Mr. Froude will meet with more sympathy in his admiration of the qualities of the daughter than of the father. It was difficult to persuade us that it was only the kingly sense of duty to his subjects, the desire to avert the perils of a disputed succession, by providing the realm with a male heir, which induced bluff King Hal to change his wives as he changed his armour; to cut off, without scruple and without remorse, the heads of women which had rested on his bosom in tender love; to decapitate one wife on Tuesday, and marry another on Wednesday. We are disposed to believe, as will appear, that Elizabeth after a struggle—a most desperate and nearly mortal struggle—did sacrifice, for the security of her throne and the welfare of her people, the only real passion she ever felt; a passion, indeed, thrown away on a most worthless object. On her flirtations (we must use the term, for we know no better one), Mr. Froude is not sparing. They were at least more public, more undeniable, than the foolish levities, the silly speeches, the French gaieties, which cost her poor mother her head, but for which the historian of Henry VIII. had little charity. On those of Elizabeth her historian dwells with very amusing if not very edifying copiousness; and of these of course we have by no means seen the last, though we  
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see enough in these volumes. About this subject more hereafter. On the whole, indeed, we have some doubt, whether Mr. Froude has not unintentionally failed to hold with rigorous impartiality the balance between the greater and baser qualities, the nobler and more ignoble actions, the loftier and more ordinary touches of character in the Queen. While the intrigues, the duplicities, we fear mendacities, the injustices and ingrati- tudes, the parsimonies, the irresolutions, the vacillations, the caprices, the vanities, are spread out with the most minute particularity, on the other hand the unexampled difficulties of the Queen's position, the sudden revulsions to the great and lofty, the resumption of the 'lion port,' and of the sagacious, all-penetrating judgment, the proud and determinate resolve, the greatness in peril and in reverse, are compressed into paragraphs and sentences—pregnant paragraphs indeed, and emphatic sentences, but still comparatively brief, and therefore comparatively unimpressive.

A few words before we enter upon the work, upon its style and manner of composition. The style is excellent; sound, honest, forcible, singularly perspicuous English; at times with a sort of picturesque simplicity; pictures dashed off with only a few touches, but perfectly alive. The Carlylism which slightly infected Mr. Froude's earlier volumes has disappeared, except, perhaps, here and there in a sarcastic sentence. We have never to read a passage twice. We cannot express quite the same satisfaction with the mode of composition. We cannot think it the perfection of history, to give us the documentary evidence in the text, to offer the materials crude, undigested, unharmonised, not having passed through the mind of the author, not moulded up in a continuous, flowing, unbroken narrative. Still, if a defect, when compared with the highest ideal of history, this defect is not without its charm and attractiveness. There is something almost dramatic in thus introducing the actors on the scene, speaking their own words, betraying their own secret thoughts. We hear ambassadors actually conversing with their Sovereigns, and their Sovereigns dictating to their ambassadors. Above all we see the course of events day by day; not only the more serious and important communications, but the gossip of the hour; not the mature opinions only, but the guesses, the suspicions, the intrigue in all its growth and development, the counter-intrigue in its subtle under-workings. Mr. Froude may at least urge that his despatches and letters are more true and real, and therefore have better right to a place in history than the speeches, made for the characters, in the classic historians, and by some of their modern imitators. If truth and vivid reality be  
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after all the perfection of history, much is to be said in favour of this mode of composition. The excellence, too, of such a work will mainly depend on the value of the materials, thus less artistically wrought up. In Mr. Froude's *intarsiatura* the materials are, many of them, singularly curious and original. They are derived with indefatigable industry from various sources, some as yet altogether unexplored. Of these many are from our own archives, at the Rolls\* especially, where there are still rooms full of unconsulted papers. From the domestic French, Scotch, and Irish, &c. &c. MSS. in the Rolls, we have extracts without end. To the Hatfield Papers, not perhaps quite so important as might be expected, Mr. Froude has had free access. There is less new among the French documents, excepting in the very remarkable publications of M. Teulet. But the great treasure house is the repository at Simancas, important in proportion to the influence of Spain in the affairs of the whole world, more especially in those of England. With some breaks the correspondence between the three ambassadors of Philip—De Feria, De Quadra, De Silva—has betrayed the secret of many transactions which Philip himself, could he return to this world, would be astonished to find (deeply buried as he thought them in awful silence) published to the wondering world.

There can be no doubt that in those times the centre of European politics (and politics and religion were indissolubly moulded up together) was the Court of Spain, the Palace, the chamber, the study, the mind of Philip II. He had everywhere his ambassadors, men mostly of consummate ability, communicating with loyal fidelity what they gathered with indefatigable industry, acute observation, incessant vigilance. He had everywhere, besides these, a host of spies; if of more doubtful honesty, checking each other, and all fully aware that their wages, perhaps their life, depended on their trustworthiness, or at least on their eluding detection. Not an event in any one of the Courts of Europe, not a speech of a Sovereign, not an intrigue, hardly a scandal, not the commonest affray in the streets, not a loose thought or expression dropped from any man of rank, but found its way to the greedy ear of Philip. His study was a great 'Times' office, which had 'its own Correspondents' all over the habitable world. But this mass of information, instead of

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\* To the great obligations which the present Master of the Rolls, Sir J. Romilly, has conferred on the student of history, in what are called 'the Rolls publications' (volumes, of course, of varying value and ability in execution), is to be added, as we understand, a complete series of the Simancas documents relating to England. The volumes already published belonging to the reign of Henry VII., by M. Bertrando, promise a rich harvest.

being poured abroad in thousands and thousands of sheets, and spreading to the utmost limits of the universe, remained a profound mystery, we will not say in the secret councils, but in the single mind of the laborious King. Hundreds of despatches exist, evidently read with the utmost care, corrected by the hand, meditated by the deepest thought of the monarch. Royalty was with Philip no quiet, majestic repose, like that of the gods of Epicurus; no enjoyment of the pomps and luxuries of the throne; not even the free and lofty consciousness of power, moving as it were by a superior will and deliberate impulse the great wheels of human affairs. No banker's clerk in the severest office; no labourer in the dreariest seasons and on the most barren soil; we may almost say no galley slave, worked harder than the Sovereign of a large part of Europe and of almost all the known provinces of the New World. As hardly anything stirred in the world without his cognizance, so hardly anything moved without an impulse or influence from him. The similitude is homely, perhaps coarse, but we can compare him to nothing but a huge spider, seemingly quiescent at the dark corner of his web. That web overspread the world, and every thread of it, every filament, throbbed and palpitated towards him, bearing its imperceptible but sure intelligence, and conveying his influence—we had almost written his venom—in unbroken and as imperceptible force to every remotest extremity. European politics had shifted their centre of unity; it was no longer Rome, as in the Mediæval times; it was no longer the Pope to whom, as to the heart of the world, circulated, and from whom flowed back, the current of human affairs. It was Spain; it was the King of Spain whose words went abroad into all lands; whose policy might seem the pivot on which turned the destiny of humankind.

It is a very curious fact, that during these eventful times, and in this crisis of the power and of the religion of mankind; in this Maelstrom of the conflicting tides of human interest, human opinion, when nothing was fixed, nothing stable; when the whirling currents mingled the most opposite factions in the same eddy, and dashed against each other those vessels which had been accustomed to ride in the calmest amity; in this boiling up of new opinions, and the heavy settling down of old authorities and institutions, Philip was the only male Sovereign of power and influence in Western Europe. The Emperor, of the younger branch of the great Spanish house, stood much aloof: he had enough to do with Germany and the Turks. But as if Providence had determined to perplex and try the faith of John Knox, in despite or in scorn of his terrific blast against 'the monstrous Regiment of Women,' women sat on all the thrones of Europe,

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or at least exercised the royal authority. The Queen Regent in Scotland Mary of Guise, Elizabeth in England, Mary in Scotland : before long, and, for a more limited period, Catherine de' Medici in France.

It might seem, too, that Providence took delight, if we may venture the expression, in heightening the romance of these times ; we may say more reverently, in taking the wise in their own craftiness, by sudden interpositions which changed at once and instantaneously the balance of conflicting parties, dashed to the ground the fairest schemes, and in a moment made a total revolution in human affairs. During the short period of nine years comprehended in Mr. Froude's two volumes—November, 1558, to February, 1567—comes first the death of Mary of Guise, the Queen Regent of Scotland. This might have been expected in the ordinary course of events : but it had great weight in the affairs of Scotland, and, for the time, greatly increased the strength of the Reforming Lords. But the death of Henry II., by the 'accidental thrust of a Scotch lance,' changed at once the whole politics of France, and, through France, of Europe. The death of Francis II. made another revolution as sudden and as complete. From Queen of France, backed by the unresisted power of her uncles, the Guises, from the bold, avowed competitor of Elizabeth, claiming, as was asserted, by a more legitimate title, the crown of England, Mary became no more than Queen of barbarous and inhospitable Scotland : instead of the pomp and voluptuousness of the Court at Paris, she had to confront a poor, a fierce, and rude nobility, arrayed against each other in implacable factions, and the stern rebuke of Knox. The government of France was thrown into the hands of Catherine de' Medici. What had it been if the dire malady which reduced Elizabeth to the brink of the grave (she was utterly despaired of, she lay insensible for four days) had been permitted to take its course ? As it was, her peril, by making the succession a question of national life or death, could not but have a powerful effect on the minds of her subjects, and so on the course of events. We may add the plague at Havre, which reduced so awfully the rising military force of England, and could not but for a time lower the tone and pretensions of Elizabeth. At a later period, human wickedness might seem, with the suddenness and awfulness of Divine visitation, to take upon itself the working out of these pregnant and fateful catastrophes. The death of poor Amy Robsart, not unforeseen nor unforeboded, whether or not caused by crime, (and by whose crime ?)—by abandoning Elizabeth to the uncontrolled and fatal influence of Leicester, well-nigh imperilled

her throne, and, more than that, her fair fame. Of the murder of the Duke of Guise, Mr. Froude observes (i. p. 494), 'that one single shot struck the key-stone from the arch of the Catholic confederacy, and changed the politics of Europe'—the Guise family fell, with their head, into comparative obscurity and insignificance.\* Still further on, the sudden though premeditated murder of Rizzio, and—inevitably, it should seem, to follow—the murder of Darnley, plunged Mary at once, and in a day, from the dangerous rival of Elizabeth, from the hopeful champion but now of Spanish and Popish intrigue against the freedom and the religion of England, to a dethroned outcast, a fugitive in the kingdom of her antagonist, and at length her victim.

The destiny of the world might seem to hang on the conflict, on the opposing characters and fate of these two wonderful women, Elizabeth of England and Mary of Scotland. In its interest—its more than historic interest—it was never surpassed by tragedy or novel, in what the old Greeks would have called the *περίπτερις*, in the breathless rapidity of the movements, yet at the same time the subtle unravelling of the double plot; the at times violent and instantaneous yet skilfully and artfully prepared shiftings of scene and of action; the turns of fortune and of fate; the awful importance, it might seem, of the issue. What was that issue? The fate of England: whether she should crouch back, if not for ever, for years, under the yoke of Spanish power and Romish religion, or bound forward and at least make the first step towards her designated place as the van-leader in the race of human progress; as the one great model of a free monarchical constitution; as dimly foreshadowing what after some centuries she was to become under the rule of Queen Victoria.

From a prison Elizabeth at her accession came forth to be acknowledged with one voice Queen of England. From that prison there had been every chance—there was, indeed, an earnest desire, a fixed determination on the part of her enemies—that she should go forth to the scaffold. We have been told that the secret of her suspected treason (some correspondence with France) lies hid in a letter, written in an unread and as yet unreadable cypher. In her seclusion, Elizabeth could only show, of high qualities, courage and prudence. For her acquirements and her accomplishments we may rest, perhaps, in full faith on old Roger Ascham. No one doubts her familiarity with Greek and Latin: Latin she spoke fluently, Greek afterwards to the wonder and admiration of both the Universities (perhaps their

\* Even the death of De Quadra, just as he had attained the triumph of his diplomacy, the marriage of Mary of Scotland with Carlos, King Philip's son and heir, seems to have disorganised the whole scheme, and set all afloat again.

Greek was not so strong as to be fastidious); of modern languages, especially of Italian, she was a consummate mistress. That, emerging thus from obscurity, she took her seat upon the throne with perfect dignity, self-possession, even majesty; that her words, her unprompted words, were full of vigour and wisdom, all are agreed. She was now twenty-five years old.

Yet, when she looked at home, and when she looked abroad, the position of Elizabeth at her accession and during the first years of her reign was, perhaps, the most extraordinary, the most difficult, in which Sovereign was ever placed. She was at war with France, she was the ally of Spain. England had been dragged into the war for the interests, the ambition, by the authority of Philip. England had borne the greater part of the burden; she had suffered the most ignominious losses of the war. She had lost Calais, the last relique worshipped with all the blind zeal and fondness of relique-worship by the whole kingdom. This loss had sunk deep into the cold and preoccupied heart of Mary: grief for Calais was her one proud, indelible English feeling. The country was in such an utter state of exhaustion that against a French descent there was absolutely no defence. In the language of a writer of the day—

‘The Queen poor; the realm exhausted; the nobility poor and decayed; good captains and soldiers wanting; the people out of order; justice not executed; all things dear; excesses in meat, diet, and apparel; division among ourselves; war with France; the French king bestriding the realm, having one foot in Calais and the other in Scotland; steadfast enemies, but no steadfast friends.’—i. p. 8.

Besides this total destitution of all materials, even of defence, there was a debt then esteemed and felt to be of enormous, of irretrievable magnitude. And in this war with France the Protestant, by education, by principle, by disposition, was the ally—the faithful ally, she must be, or seem to be (unless she would expose herself to be the victim of a Catholic league of the Pope, of Philip, and of France, almost of the world)—of ultra-Papal Spain. And yet, in heart and in mind, she was not Protestant enough to take the desperate plunge (utterly desperate it might seem to the boldest fanatic), and set herself at the head of the Reformation. She, a queen, with the strongest hereditary, inborn, indelible conviction of the sanctity of royal authority, must resolve to be the head of rebels, as the Reformers were in every kingdom of Europe; rebels sternly suppressed in Spain by fire and the stake; not yet goaded by insufferable cruelty to irresistible revolt in the Low Countries; rebels now cowed, and not strong enough to resist persecution in France; rebels distracted by what appeared implacable feuds  
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in Germany; rebels in Scotland under the author of the 'Trumpet-blast against the monstrous Regiment of Women'! We know not whether her sagacity had already discerned what Mr. Hallam somewhere calls the 'Presbyterian Hildebrandism' in the systems of Calvin and of Knox; but to that in which the strength of Protestantism seemed to lie, the Puritanism—we know no better word—which the English refugees had contracted at Frankfort and at Zurich, Elizabeth was as averse as to Papalism. Still that she was Protestant as regards the authority, the tyranny of Rome, we require no further testimony, as to all her earliest acts and proceedings, in her private chapel, in her public measures, than that of the Spanish ambassador De Feria. 'Obstinate, perverse, wicked, irreclaimable heretic'—'heretic to be put down by craft, by force, by any means,' is the burden of all his letters; and it is to his utter dismay and astonishment that the Catholic Philip condescends to temporise—that he does not, at all hazard, at any cost, at any sacrifice, crush the baneful spawn which he foresees may wax and grow into an untameable dragon.

We do not wish to disturb our readers' seriousness, but, somehow or other, Sheridan's 'Critic' is constantly, either from its genuine wit or from some perverse old associations, blended in our mind with the reign of Elizabeth. We do not allude to the warning against 'Scandal about Queen Elizabeth,' which Scott so cleverly placed as his motto before 'Kenilworth'; but to a scene, the triumph of Mr. Puff's tragic art, which singularly typifies almost this whole reign, especially its commencement: 'There's a situation for you!—there's an heroic group! You see the ladies can't stab Whiskerandos; he durst not stab them, for fear of their uncles; the uncles durst not kill him for fear of their nieces. I have them all at a dead lock, for every one is afraid to let go first!' Even so Elizabeth dared not defy or quarrel with Philip, for fear, not of him only, but of her own Catholic subjects; Philip could not stab the heretic to the heart, for fear of France; Philip, too, was in dread of the heretics in the Low Countries; the King of France (Henry II.), of the Huguenots; Elizabeth could not resolutely take part with the Reformers in France or in Scotland; hatred of England, and nationality, would not allow the Scotch Reformers to league heartily with Elizabeth. Elizabeth could not, or would not, boldly take their part, from dread of a rival for her own throne in Mary, believed by most of her Catholic subjects, asserted by many, to be the legitimate Queen of England. No one could 'let go first'—no one could move on account of the dagger at his or her throat; no one could strike the other without provoking a more formidable enemy.

enemy. Never was such a game of political cross-purposes, which no dexterity could play out, no address bring to a safe termination. On the issues of this conflict hung the future of England, of religious reformation, and this depended upon a woman—in some respects, a very woman.

But Elizabeth had her good genius. By her side as she emerged from her prison, the firm supporter of her steps as she ascended her throne, stood Sir William Cecil, and by her throne almost throughout her reign remained Cecil—faithful to the end, wise to the end; in all material points, and with some brief interruptions, trusted to the end. In all this revelation of the dark secrets of domestic and foreign policy, the wisdom of Cecil but shines the brighter and more conspicuous. We mean not that in this labyrinth of intrigue and counter-intrigue, of duplicity and counter-duplicity, of mendacity and counter-mendacity, through which Wellington himself could hardly have kept a straightforward course, Cecil did not meet craft with craft, hypocrisy with hypocrisy; did not use base tools to work against base tools; did not countermine works of darkness with works of darkness; but considering the warfare in which he was engaged, the enemies against whom he had to strive, the interests which he had, we say not to reconcile, but to balance against each other; the Queen, the woman, we must add, whom in all her humours, caprices, passions, prejudices, he had to keep in the path of honour and of glory, it is marvellous how his character comes forth, with still more commanding greatness, in the broad and glaring light which Mr. Froude's discoveries have thrown upon him. Whenever Elizabeth went wrong, Cecil was not heard, Cecil was absent, Cecil was in disgrace, or his influence was in abeyance; and it is perhaps more extraordinary, when Elizabeth righted, as she always did come right—when her better nature returned, as it almost always did return, this regeneration was either inspired by Cecil, or urged by Cecil for the advantage of the country, for the fame of Elizabeth herself. At one period only of obscurity, the conduct of Cecil seems inexplicable, nor do we believe that Mr. Froude has quite explained it; and at that time when the baleful star of Leicester was in the ascendant, at its very height, Cecil, in his desperation, had almost withdrawn from the contest, and left Elizabeth to her own wayward and perverse will. But Cecil rallied, if Cecil had ever really despaired; Elizabeth came to her senses; and the greatest peril which loomed over the future of England, of human liberty, and reformed religion, passed away with the restored ascendancy of Cecil. It is really curious to trace Cecil throughout these volumes; and let us remember that it was Elizabeth

Elizabeth who had the wisdom to choose Cecil from the host of her not less ambitious and more obsequious councillors; and that to Cecil alone, she was, with slight breaks, constant to the end:—

‘To Cecil, indeed, it was that Elizabeth had turned with exceptional and solitary confidence. He had received her instructions beforehand how to act; and while she herself remained at Hatfield, without waiting to communicate with her, he assumed the instant direction of the Government. Within an hour of Mary’s death he had sketched the form of the proclamation. The same day he changed the guard at the Tower. The ports were closed. Couriers sped east, west, north, and south, to Brussels, to Vienna, to Venice, to Denmark. The wardens of the marches were charged to watch the Northern Border. Before the evening of the 17th of November, the garrisons on the Kent and Sussex shores had trimmed their beacons, and looked to their arms. A safe preacher was selected for the Sunday’s sermon at Paul’s Cross, “that no occasion might be given to stir any dispute touching the governance of the realm.”

‘The next step, characteristic both of Cecil and his mistress, was to stanch the wounds without the delay of a moment, through which the exchequer was bleeding to death.’—i. pp. 14-15.

Let us hear the unsuspecting testimony of the Spaniard De Feria:—‘Cecil governs the Queen. He is an able man, though an accursed heretic’ (p. 68); ‘that pestilential scoundrel Cecil’ (p. 77). The Spaniard has here lost his manners as well as his temper. Cecil would have followed a bolder policy with regard to the Scotch Reformers. He corresponded (Elizabeth knew that he did) with the Lords of the Congregation. To what this policy might have led, we know not; but it would have saved Elizabeth from the shame, and from the mischief of much base duplicity. ‘Cecil would pluck safety only from the nettle of danger’ (p. 168). In the hour of peril, when Philip threatened war, when there were to be

‘six thousand Spaniards thrown upon the Norfolk coast; all Catholic England rising to welcome them; and Elizabeth obliged to retrace her steps, restore the Catholic bishops, marry Carlos, and live as a satellite of Philip—this was the scheme which filled the imagination of the Spanish ministers, and which faded away only when the Queen surprised friend and foe by rising triumphant over her difficulties by her own energy and skill.’—i. 173.

That energy and skill were the inspiration of Cecil.

The Church of England is no less indebted to Cecil. He gave Archbishop Parker to the Queen; and on the blamelessness and prudence of Archbishop Parker how much depended! If a Grindal or a Whitgift had been then the Primate, what had been the



the Church? To Cecil's honest religious earnestness, hear the testimony of De Quadra :—

'Cecil, who is the heart of the business, alone possesses her confidence, and Cecil is obstinately bent on going forward with his Evangel till he destroy both it and himself' (Jan. 1560).—i. p. 188.

'A paper of measures,' thus writes Mr. Froude, 'was sketched by Cecil for the national defences, the first of which—characteristic of his simple piety—was "to see the realm set in order with a clergy, that the ire of God light not upon the people"' (Mar. 1560).—i. p. 210.

The Treaty of Edinburgh (July, 1560) was the work of Cecil. That the treaty was never ratified, that it seemed to make worse confusion, was the result of circumstances : of the death of Francis II. and the altered position of Mary Queen of Scots, which Cecil could not foresee, over which he had no control. Cecil's temporary loss of influence through his absence in Scotland, only showed how indispensable he was to Elizabeth and to England. We shall revert to the one questionable act of Cecil, his intercourse with De Quadra. Nor must we confine the usefulness of Cecil to foreign, or what were called State affairs.

In the revolution which was silently going on in the social condition, Cecil was no less what we call the Government :—

'In this, as in all else, Cecil was the presiding spirit. Everywhere among the State papers of these years Cecil's pen is ever visible, Cecil's mind predominant. In the records of the daily meetings of the Council Cecil's is the single name which is never missed. In the Queen's cabinet, or in his own, sketching Acts of Parliament, drawing instructions for ambassadors, or weighing on paper the opposing arguments at every crisis of political action; corresponding with archbishops on liturgies and articles, with secret agents in every corner of Europe, or with foreign ministers in every court, Cecil is to be found ever restlessly busy; and sheets of paper, densely covered with brief memoranda, remain among his manuscripts to show the vastness of his daily labour, and the surface over which he extended his control. From the great duel with Rome to the terraces and orange groves at Burleigh, nothing was too large for his intellect to grasp, nothing too small for his attention to condescend to consider.'—i. pp. 461-462.

There are some very remarkable papers with regard to the Fisheries, at the time when the fasts were retained in the Church of England for no more religious motive than the maintenance of the fisheries in the Channel. On the Corn Question the noble descendants of Cecil at Burleigh and at Hatfield will be delighted to find him a rigid Protectionist; and in the circumstances of the time he will perhaps find indulgence for his heresy with the severest Political Economists.\*

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\* Vol. ii. chap. xii.

" Even so in political affairs is it to the end of these volumes. Cecil, everywhere Cecil. Philip warns his new ambassador De Silva: 'So long as Cecil remains in power, you must be careful what you do.' De Silva replies, 'Cecil has more genius than the rest of the council put together, and is therefore envied and hated on all sides' (ii. pp. 89 and 102). Even as to desperate Ireland he gives the best, because the boldest and most honourable advice' (ii. 410).\*

If Cecil was the good genius, assuredly Leicester was the evil genius of Elizabeth. It was this fatal weakness, her passion for this vain, unprincipled, incapable man, which nearly wrecked her fame and her country; which even after she had resolutely burst the bondage and submitted—reluctantly, but absolutely submitted—to the will of her subjects, who she avowed would not permit her to marry Leicester; it was the yet uneradicated, if subdued, passion which made her, so fatally, as Mr. Motley has shown, commit her affairs in the Low Countries to this most unfit of men.

Yet something may be said, at least, if not to excuse, to palliate the infirmity of Elizabeth. Robert Dudley had been her playmate in youth; he had been her fellow-prisoner in the Tower. He was young, he was handsome, he was a smooth courtier. He had, what Elizabeth describes, a peculiar delicacy, wanting, perhaps, in her other ruder and more manly nobles.

His want of capacity, if she clearly discerned it, may have been almost a recommendation. Whomsoever she married, if she married, Elizabeth would still be no less than Queen. She did not want, she could not have brooked, a rival on the throne, even though that rival were her husband. That she loved Robert Dudley, though Mr. Froude throws out cold doubts, yet surely we may trust her speech, when in her perilous illness† (she had been almost dead for four days) she could not but believe that she was dying, she uttered these words, which, we confess, sound to us pathetically true:—

'At midnight the fever cooled, the skin grew moist, the spots began to appear, and, after four hours of unconsciousness, Elizabeth returned to herself. The Council crowded round the bed. She believed that she was dying: her first words, before she had collected her senses,

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\* We have no room to trace the odd connexion which Mr. Froude shows between the reformed faith and the naval power of England. The fishermen who had lost their trade through the new opinions, found it necessary to go further a-see: they became adventurers: enlisted with Hawkins and those who took to piracy, that honourable profession of the days of Ulysses. Spanish gold turned out to be better prize than herrings or mackerel: watching Spanish galleons better sport than watching shoals of pilchards.

† October, 1562.

were of Lord Robert, and she begged that he might be made Protector of the Realm. As she grew more composed, her mind still running on the same subject, she said she loved Lord Robert dearly, and had long loved him; but she called God to witness that "nothing unseemly" had ever passed between them.—i. pp. 430-431.

Consider, too, who were the rivals—we will not say for her heart—for her hand. It is really amusing to run over the list of Elizabeth's wooers. The first (we pass over Philibert of Savoy) was no less than her sister's late husband, Philip II. Philip, who, if there were no other objection, had shown, by his cold, killing neglect, what were his notions of matrimonial duty and attachment in comparison with his duties as King of Spain. Now and then a flying visit of a few weeks, the sullen, almost contemptuous, cohabitation, the meddling in the affairs of the country, the dragging England into his wars, seemingly his only interest in the kingdom of his wife. And if Philip had any hopes of success, his mode of courtship was not likely to move Elizabeth. No doubt if she had not seen the extraordinary letter,\* printed by Mr. Froude (and it was shown about in the Court), she could well divine its purport, that Philip had condescended, after a violent struggle, to sacrifice himself for the sake of his religion; to offer his hand to the Queen, in order to rescue the benighted Elizabeth and benighted England from the perdition of heresy.

'Nevertheless, considering how essential it is, in the general interests of Christendom, to maintain that realm in the religion which, by God's help, has been restored in it—considering the inconveniences, the perils, the calamities which may arise, not only there, but in these States also, if England relapse into error—I have decided to encounter the difficulty, to sacrifice my private inclination in the service of our Lord, and to marry the Queen of England.'—i. pp. 35-36.

Then came the boy Arran,† whom Elizabeth saw in secret, but whose utter folly (the half-crazy fool, Mr. Froude calls him—that craziness broke out afterwards in something hardly above idiotcy) could scarcely escape the keen observation of the Queen. He was even below Darnley in intellect; and conceive Elizabeth wedded to a Darnley!

Of the King of Sweden, Mr. Froude plainly says, in a note, that there was not so great a ruffian among the crowned heads of Europe.

Unquestionably the most eligible, the least objectionable,

\* January, 1559.

† Arran was also proposed for Mary. 'Arran, however, was moody, incapable, and weak; and the Queen of Scots detested the very thought of him; he would lie in bed a week at a time, brooding over his wrongs till he grew distracted' (i. 406).

were" the two Archdukes. The elder, Ferdinand, Elizabeth ridiculed :—'She was told, she said, that he was a fine Catholic, and knew how to tell his beads and pray for the souls in purgatory' (i. p. 97).

Of the younger, Charles, almost all that was then known was that he had a 'bigger head than the Earl of Bedford.' This Archduke was for a time the candidate of the country, of Cecil himself. But Elizabeth, either from policy, prudence, or a woman's natural feeling (whether the large head—in Bedford certainly not incompatible with abilities and virtues of a high order—might threaten sullenness and stupidity) was determined against a blind bargain. She insisted on a visit to her Court from her suitor. For some reason or other, this not unreasonable demand was always resisted, or put off by the Emperor or by the Archduke himself. Cecil in two remarkable papers balances the claims of the Archduke against those of Leicester.\* Still Cecil must have known, as Elizabeth well knew, that the Archduke was a Catholic of the Spanish House; might be dangerously enslaved to the religion and to the politics of Philip. With the strength of the Catholic faction, it might be dangerous to have a head of that faction on the throne; and Elizabeth was almost less disposed to have one set over her in religion than in civil rule.

Last, at this period (in later days was to come the miserable Duke of Anjou), was Charles IX. of France; a boy of fourteen. What Charles became, under the misguidance of his mother, even the sagacity of Elizabeth and of Cecil could not foresee. St. Bartholomew's Day cast no shadow before. But a boy of fourteen for Elizabeth, then twenty-seven!! especially when the great object was an heir to the throne.†

On Cecil's side, besides his own unrivalled sagacity, his lofty principle, his sturdy and earnest Protestantism, his lofty hopes of the future of his country, was all the right feeling of England: the jealousy and hatred of all classes, especially of almost all the statesmen and nobles, of Leicester; Leicester's own wretched character, the ineffaceable suspicion which attached to him as to his wife's death. On the side of Leicester was the Queen's weakness, not by any means to be depended upon; even on this her weakest point flashes of good sense,

\* See Notes, i. 282, ii. 286.

† The reader must turn to ii. p. 123 et seq., for the very strange yet characteristic letters of the scheming, unscrupulous Catherine, the *argumentum ad hominem*, pressed upon Cecil :—'The Queen-mother liketh marvellous well that you had a son in your fourteenth or fifteenth year . . . and thinketh you may serve as an example to the Queen's Majesty not to contemn the young years of the King.'

of lofty feeling, of shame at her weakness, were constantly breaking forth; the whole Catholic interest, with which Dudley was endeavouring to identify himself; the Spanish Ambassador, the most consummate master in the craft of diplomacy; and, through the Spanish Ambassador, the King of Spain. This Good and this Evil Genius of Elizabeth were to join in mortal struggle, and try their powers of magic over the Queen.

For against Cecil, Philip II., who was never wanting in discernment in the choice of his agents and ministers, had pitted the very ablest and most devoted, De Quadra, Bishop of Aquila. It is from the correspondence of De Quadra that Mr. Froude has drawn his most curious and original information. It was a gladiatorial contest for the life and death of England, for the power and fame of the Spanish King. To De Quadra's ears, ever open, came every fact, every rumour, every conversation, every whisper in the Court, in the city, in the country; and every the minutest incident was faithfully transmitted to the expectant ear of his Sovereign. De Quadra was in constant, it might seem confidential, communication with the Queen; Cecil himself might appear hardly more deep in her counsels. He saw her in all her moods, serious or playful; in her private chamber, in her amusements. He saw her everywhere but in her chapel; but everything which took place in that chapel, every prayer, the cross or no cross, every Romish or anti-Romish posture, ceremony, every genuflexion, was reported in the most minute and particular detail. He was on the most intimate footing with all the nobility, Catholic or Protestant. To him of course the Catholics looked as their guiding star; he held them, and with them perhaps two-thirds of the kingdom, as in a leash, to let slip when it might suit his master's interests. His great trial and difficulty was to hold them back from premature and ill-timed mutiny or rebellion. With Cecil himself for a time, till Cecil felt himself strong enough to endeavour to rid the land and the Queen of this importunate and dangerous visitor, he was, outwardly at least, on most amicable terms. In his residence, Durham House, in the Strand, all the intriguing, all the discontented, all the disaffected found security and audience; the stricter Roman Catholics could steal to the unmutated rites of their Church; and it was only at a late period that Cecil dared to venture the unhousing of that formidable foe. To trace the workings and counter-workings, to disentangle the inextricable net, is even now, after all the Simancas revelations, scarcely possible. Some of Cecil's most questionable acts may perhaps have some hidden motive which cannot be detected. These two consummate players at diplomatic chess so concealed their game, that the looker-on, proverbially keen-sighted, may at last be baffled. When Cecil allowed his Queen to be in  
check,

check, it may have been but a feint to drive his adversary's King into a corner.

It was the Leicester marriage which nearly threw the game into De Quadra's hands. This intrigue, in its depth, intricacy, and in its imminent success, is the most extraordinary of Mr. Froude's revelations. It commences—at least we plunge into the thick of the plot—with a letter of De Quadra to the Regent of the Netherlands (vol. i. 227). Cecil, he says (and of this fact there is undoubted evidence in Cecil's correspondence with Randolph), was in disgrace. 'Lord Robert, I was aware, was endeavouring to deprive him of his place.' Cecil, in a familiar conversation, allowed himself to be led by the wily Spaniard to the fatal subject. 'It was time,' he said, 'for a prudent sailor to make for port when he saw a storm coming; and for himself he perceived the most manifest ruin impending over the Queen through her intimacy with Lord Robert.' He dwelt on that intimacy, her determination to marry him; that the realm would not tolerate it; for himself, he should withdraw from public affairs, and retire into the country, if he were not sent to the Tower.' He also said 'that they were thinking of destroying Lord Robert's wife.' But the reader must peruse this whole letter, which betrayed, among other secrets, the determination of a powerful party to set the Earl of Huntingdon on the throne. 'Cecil himself told me that he, Huntingdon, was the true heir to the Crown.' After this conversation, but before the letter was despatched, the news had arrived of the death of Amy Robsart. What is the meaning of all this? Mr. Froude acknowledges the insoluble difficulty. That Cecil, the cautious Cecil, should make De Quadra his confidant in what bordered on treason, and when he was in danger of the Tower. Is it possible that in his desperation Cecil, to whom the Queen would not now listen, would suppose that she might receive the warning of her peril from De Quadra?

This was in September, 1560. But Cecil is not in the Tower; he is not out of place; he is in intercourse with the wise Paget, he is in correspondence with Throckmorton, who dares to remonstrate with the Queen against the marriage.

In January, 1561, the darker plot unfolds itself. It is no less than that Elizabeth, in order to marry Leicester, should throw herself altogether upon the alliance with Spain and with Philip, and, under the protection of Philip, restore the religion of Spain and of Rome. The overtures to this unholy alliance were made to De Quadra, alas! by Sir Henry Sidney, the brother-in-law of Leicester. But De Quadra was mistaken if he thought that in her hour of extremest peril, of extremest weakness, Cecil had de-  
serted

sented his mistress. He was 'determined to save his mistress if she could be saved.' We find him in March 'baffling and mystifying De Quadra himself.'

'I know not what to think; things are so perplexed that they utterly confuse me: *Cecil is a violent heretic; but he is neither a fool nor a liar, and he pretends to be dealing with me frankly and honestly.* The points which he concedes about the Council are of great value. "The Queen's position is a most difficult one; but although it is possible that the consciousness of her danger, united with her passion for Lord Robert, may make her really desirous to rejoin the Church, so it is possible that she may be playing a game to keep in favour with your Majesty, and to deceive her Catholic subjects with hopes which she has no intention of fulfilling" (March, 1561).—i. 336.\*

Cecil, 'firing a last shot as he took his leave (of De Quadra),' added, 'that if the Pope wrote to the Queen, he must address her as Defender of the Faith; if her titles were inadequately rendered, the letter would not be received.'

The first step in the plot was the admission of a Papal nuncio to the Court. With his consummate dexterity, Cecil seized on this point on which all England was specially sensitive. The awful word *Premunire* was heard. Elizabeth had begun to draw back; she sent for De Quadra; she asked

'particularly what Philip had proposed to do about Lord Robert and herself, in case Catholicism was restored.

'De Quadra replied sullenly that Philip had proposed nothing. Overtures had been made by Sir Henry Sidney, by Lord Robert, and by herself; Lord Robert had declared expressly, in his own name and hers, that England was to be brought back to the Church; and the King of Spain, who was only anxious for the welfare of the realm, had professed extreme pleasure at the news' (May, 1561).—i. p. 341.

But Cecil had not yet faced the worst. We must give the following extraordinary scene in De Quadra's words. It was a water-party on the Thames, on St. John's Day, with all London abroad and agape. We must understand that Cecil had dexterously committed the Government with measures adverse to the Catholics. De Quadra had remonstrated:—

'She listened patiently, and thanked me for my advice. In the afternoon we were in a barge, watching the games on the river. She was alone with the Lord Robert and myself on the poop, when they began to talk nonsense, and went so far, that Lord Robert at last said, as I was on the spot there was no reason why they should not be married, if the Queen pleased. She said that perhaps I did not under-

\* About a year later, De Quadra, who had boasted that he had spies everywhere (on one occasion he says that he knew the exact sum which Cecil had expended on a certain object), discovered that his own secretary was in Cecil's pay: his most secret papers in Cecil's hands.—i. p. 397.

stand sufficient English. I let them trifle in this way for a time, and then I said gravely to them both, that if they would be guided by me, they would shake off the tyranny of those men who were oppressing the realm and them; they would restore religion and good order; and they could then marry when they pleased—and gladly would I be the priest to unite them. Let the heretics complain if they dared. With your Majesty at her side, the Queen might defy danger. At present it seemed she could marry no one who displeased Cecil and his companions.’—i. p. 349.

And Elizabeth did not ‘marry one who displeased Cecil and his companions.’ Though to the last this fatal affection clung around her; though she extricated herself only after a violent struggle from the ‘bird-nets’ of De Quadra; yet let us do honour to Elizabeth’s strength as well as condemn her weakness. We know not whether the ordinary phrase of this proud, wayward woman, that ‘*Her subjects would not let her marry Leicester*,’ is not as truly great a speech as ever issued from the lips of a Sovereign,—a Sovereign by descent and by temper equally disposed to the haughty and unchristian selfishness of despotism.

Turn we now to her more gentle, it might at first seem more womanly, more attaching, more loveable, but in the end more self-willed, more fatally self-willed, sister Queen.

How wonderful, how impressive, the contrast between the education, the ascent to the throne of the rival Queens! Instead of the prison and peril of her life, Mary, bred, nursed, basking during her bright youth, in all the splendour and voluptuousness—we must speak plainly—the profligacy and villany of the French Court. Dauphiness, Queen of France, Queen of Scotland by undoubted and undisputed title; Queen of England, as some asserted, by more legitimate title, setting even religion aside, which the extreme Catholics held to be her irrefragable title, than Elizabeth; assuming the arms, the title of Queen of England. The sudden reverse which stripped the crown of France from Mary’s brows left her still undisputed Sovereign of her native realm. So well, no doubt, were her attractions, her accomplishments known, that the jealous Elizabeth will not permit her to pass through her unsettled and more than half-Catholic dominions.

‘Willing to wound, and yet afraid to strike,’

she dares not arrest her on her passage in order to extort the surrender of her immediate claim to the crown of England. This spoiled child, as we might have expected, of pomp and luxury and flattery, with difficulty unriveting her eyes from her beautiful and beloved France, obliged to soothe her sorrows by soft music, arrives in cold, barren Scotland,—in Scotland torn  
with



with fierce factions: a rude, lawless nobility, partly siding with and partly resisting the real Reformers, a band of bold fanatics, whose virtues and piety were of the hardest, sternest, most repulsive austerity.\* In an incredibly short time—a few weeks, we may say—a girl of nineteen, so bred, so trained, has awed, won, smiled, caressed; with playfulness which might become her age and sex, with prudence which might seem that of a hoary statesman, with address which might have done honour to the most consummate diplomatist, has tamed, this barbarous, divided land—this land but now in fierce intestine war, with foreign armies, French and English, fighting for the mastery—into peace, order, independence, at least into seeming harmony, and unity. She is already a formidable antagonist to Elizabeth. The stern Lords of the Congregation, Elizabeth's natural allies, but with whom she has played—as was her wont, perhaps inevitably—fast and loose, yield to the spell. Scotch nationality, under Mary's genial influence, bursts forth, and bands together what appeared irreconcilable factions. One Scotchman, and one alone—Knox—with the vaticinatory wisdom, and with the language of a prophet of old, resists, encounters the witchery, sees through the dazzling deception, and refuses to enter the magic circle. The glamour is on all the rest. Murray, the true, loyal, honest, soundly-religious Murray, Argyle, Maitland (she has the prudence to environ herself with Protestant counsellors), are at her feet, her willing slaves. To England her conduct at first is as politic and able as to Scotland.

And so for a few years the dormant, unavowed, but still under-working and unreconciled strife between these two extraordinary women goes on. Each, but Mary with the greatest steadiness and resolution, is pursuing her secret aim. Each—Mary, perhaps, the most insincere—is showing outward blandness at times bordering on adulation; each is suppressing the jealousy, hatred, rivalry, which cannot but occasionally betray itself.

Mary might seem to be playing the winning game. She, without scruple, without remorse, might intrigue with, might reckon on the support of the English Catholics. The Scotch Protestants mistrusted, as well they might, the amity of Elizabeth.

In 1563, but two years after her arrival in Scotland, Mary

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\* 'Half-a-dozen noblemen at most were really Protestants, and even these were still liable to be influenced by many motives external to religion—by patriotism, by national pride, by loyalty, chivalry, and the natural courtesy of gentlemen. The residue of the lords and gentlemen who acted with the Congregation believed only in Protestantism as an excuse for laying hands upon the Church lands; and they dreaded a Catholic reaction only because reaction menaced their chance of filling their lean purses.'—i. p. 369.

might even appear to have grasped the prize at which her ambition had been clutching so long. And what was that object? No less than her marriage with Don Carlos, son of Philip. Again we have the soul of all perilous intrigue, the indefatigable De Quadra, in all his strength and activity. Though in London, and environed by the subtle nets of Cecil, he has brought this negotiation to a close. He can announce to the eager and expectant Mary the consent, hard-wrung indeed, but still the consent, of Philip to the match.\* An agent of Philip—Della Paz—contrives to pass through England, with the welcome tidings.

The dowry which Mary was to bring, which she covenanted to bring to this ill-omened union, was the United Kingdoms of England, Scotland, and Ireland. The paranymphs of the bridal were to be the fiends of war—of national, of invasive, of religious, intestine war—let loose upon the fair fields of England. Spain, Scotland, and the Catholics of England were to join in irresistible league against the illegitimate heretic who had usurped the throne.

Of what Don Carlos was, what Don Carlos proved to be (the dark chamber of his death has not quite perhaps revealed the terrible secret), could Mary be entirely ignorant? Could Mary be so blinded as to refuse to know? How this scheme broke down, utterly, entirely broke down, does not quite clearly appear; perhaps the conscience of Philip was touched at some new outburst of his son's ferocity. But at the critical moment, before he could complete the crown and glory of his diplomatic address, De Quadra died. Mr. Froude adds:—

'How it might have fared with Mary Stuart and Don Carlos had De Quadra lived to complete the work for which he was so anxious, the curious in such things may speculate. The Prince of Spain had the intellect and the ferocity of a wolf; the Queen of Scots had a capacity for relieving herself of disagreeable or inconvenient companions. Yet they would scarcely, perhaps, have made their lots more wretched than they actually were: we wonder at the caprices of fortune; we complain of the unequal fates which are distributed among mankind—but Providence is more even-handed than it seems; Mary Stuart might have been innocent and happy as a fishwife at Leith; the Prince of Spain might have arrived at some half-brutal usefulness breaking clouds on the brown plains of Castile.'—i. p. 526.

Still up to this time, indeed up to the marriage with Darnley, to all outward appearance Mary was in the ascendant. That marriage was generally, almost universally popular in Scotland; not the less so, because it was odious to Elizabeth. Her subject

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\* See Philip's letter, of June 15, 1553, to De Quadra, vol. i. p. 520.

Darnley had escaped from her power; and to Mary it might seem that among the chief attractions to the marriage was, that it was contracted and solemnised not only in despite, but with deliberate insult to Elizabeth. How Elizabeth strove to avert it; how in seeming sincerity she proposed every one else; how she offered to sacrifice her beloved Robert Dudley, we have no space to unravel.

In the great change which was working in England, Cecil's hand, then unseen, may be traced in the general administration. The mere fact that Elizabeth could send out such an army as she sent (unhappily to perish by disease) to Havre, that she had ships beginning to be formidable on the seas, showed how the resources of England were gradually developing themselves. But Elizabeth stood now more and more alone. The breach with Spain, indeed, was not open or avowed. The new Spanish ambassador, De Silva, was still treading, if less firmly, in the dark steps of De Quadra. But Philip now looked on Elizabeth with a very different view. She was manifestly, undeniably, an obstinate, irreclaimable heretic. He would no longer arrest, as he had too long arrested, the thunders of the Vatican; the Papal excommunication was only held in suspense, if it was not already launched. The Inquisition had uttered its sentence; it was now sin for the Catholics of England to attend, as they had hitherto done, the imperfect and naked, but not absolutely impious services of the Church of England. That Church was herself distracted, feeble, and unformed. Mr. Froude draws a melancholy picture—we fear, in most of its lineaments, too true a picture—of its short-comings, its worse than short-comings, its abuses, its intolerances. It was hardly restrained, though it *was* restrained, from taking revenge for the Marian persecutions by persecutions not less cruel, but more unpardonable. A legal quibble alone saved Bonner from the destiny which he had mercilessly inflicted on so many. The lawyers were more compassionate than the churchmen. Ireland was in a state almost inconceivable even for Ireland. Shan O'Neil, till crushed by the vigorous administration of Henry Sidney, had baffled, defeated Elizabeth's Viceroy; had confronted, deceived Elizabeth in her own Court. He aspired, not without ground, to be King at least in the north of the island. Abroad, Elizabeth from her fatal determination to extort the surrender of Calais (for which her people had been and still were as furious as herself) had alienated her allies, the French Huguenots; France was again one, and hostile. Among her own subjects, on the affair of her marriage, she had played so long the comedy of 'She would and She would not,' that it might almost threaten to become a tragedy: at least there was growing up a deep and serious

discontent in every class and order and faction of her subjects. Worse still was the affair of the succession. That Elizabeth's leanings were on the whole to the Scotch succession, there can be no doubt. Catherine Grey she could not endure; and she had treated the poor weak woman too harshly to forgive her. Lord Huntingdon, whom most Protestants would have chosen, was yet hardly close enough to the descent or ambitious enough to be dangerous. The far-seeing Elizabeth could but contemplate the advantage of the union of the two Kingdoms, the object of her father's policy. If she could not suppress some proud jealousy, that Scotland should absorb England, yet the incorporation of the whole three realms in one mighty whole must have loomed upon her in the remote, the glorious future. Yet Elizabeth could not but know, Cecil could not but know, that, the succession once determined in favour of Mary, Elizabeth's life was not worth a year's purchase. She herself had said—

'were she to declare the Queen of Scots her successor, she would make a rallying-point for every malcontent in the realm; and, with no obscure intimation of her own probable fate, she said "she was not so foolish as to hang a winding-sheet before her eyes, or make a funeral feast while she was alive."'—i. p. 374.

She still refused to name Mary her successor; it was as much, she said, as to sign her own death-warrant. This was no imaginary peril, no coward apprehension. It is true that Jacques Clement and Ravailac, and the assassin of William of Orange, had not yet struck their deadly blows. The Jesuit tyrannical doctrines had not yet been avowed. But that Europe, that England, that London swarmed with fanatics, with untried Clements and Ravailacs, could not be questioned. The sacredness of life (we have sad examples on all sides in the documents of the times) was held but an idle prejudice, easily to be swept aside by unscrupulous ambition or more unscrupulous religion. Italy preferred the silent poison; the ruder North, the sword or dagger; but there were hearts enough and hands enough to instil the more quiet, or drive home the more bloody weapon.

'Already \* it had been found necessary to surround her with precautions against poison. Not an untasted dish might be brought to her table; not a glove or a handkerchief might approach her person which had not been scrutinized; and she was dosed weekly with supposed antidotes. In spite of precaution, the secret adherents of France, of the Papacy, and the Queen of Scots, held places in the royal household, and attended in the royal bedchamber. With the prize of the succession once secured, the Catholics would have made haste with

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\* March, 1561.

their opportunity, lest Elizabeth should marry and destroy their hopes.'—i. pp. 353-354.

That was in earlier days, and now \*

'it had been decided in secret council to permit Catholics in disguise to hold benefices in England, to take the oaths of allegiance, and to serve Holy Church in the camp of the enemy. "Remission of sin to them and their heirs—with annuities, honours, and promotions," was offered "to any cook, brewer, baker, vintner, physician, grocer, surgeon, or other who would make away with the Queen;" the curse of God and his vicar was threatened against all those "who would not promote and assist by money or otherwise the pretences of the Queen of Scots to the English Crown;" the court of Rome, once illustrious as the citadel of the saints, was given over to Jesuitism and the devil; and the Papal fanatics in England began to weave their endless web of conspiracy—aiming amidst a thousand variations at the heart of Queen Elizabeth.' †—ii. pp. 67-8.

Mary, on the other hand, might seem, by the bold and decisive measure of her marriage, almost to have united Scotland. Though Darnley was a Catholic, yet the Protestants acquiesced with seeming cordiality. To Elizabeth they could look no more. They had been deluded, deserted in their hour of need, disclaimed (read the sad account of her humiliation of Murray). Even Knox seems to have been silent after his memorable interview with Mary in which he denounced, but denounced in vain, the Darnley marriage. We do not hear his voice.

In two short years Mary is in the dust, without a friend but here and there a romantic youth; an outcast from Scotland, a prisoner in England.

How was this? Besides her own ungoverned passions, her utter selfishness, Mary was unhappily without any good genius. The best man in Scotland, her brother Murray, she hated with the bitterest hatred. There was one man—not a statesman, indeed, like Cecil, but endowed with much of Cecil's prudence and far-seeing sagacity, who might have been, and was to a certain extent, Mary's Cecil—Maitland of Lethington. But Maitland could not brook the ascendancy of the foreigner; he was not deep, perhaps, but he was an accomplice, in the murder of Rizzio.

But by the side of Mary there was more than one evil Genius more powerful, more fatal, than Elizabeth's *dæmon* Leicester. First and foremost David Rizzio (Ritzio, Mr. Froude writes). The favour shown to Rizzio was the most extraordinary mark of the want of wisdom in Mary Stuart. Rizzio was not, as some have supposed, a mere exquisite musician, whose art and

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\* April, 1564.

† July, 1565.

accomplishments

accomplishments might be more congenial to, and amuse the dismal hours of the Queen among her fierce subjects, some of whom had no higher notion of civilisation than wild, marauding warfare, and others were morose, iconoclastic disciples of Knox. He was a dark, intriguing, Machiavellic, Italian politician, aspiring to, actually holding in his grasp great estates in Scotland, holding in expectation an office not less distinguished than the Chancellorship of the realm. How could Mary be ignorant that in one thing alone her fierce Nobles were agreed—in the hunger for each other's estates, for places of eminence, lucre, and power? How far the fatal intimacy had proceeded is among the inscrutable problems of history. Mr. Froude (with Robertson, Scott, Tytler, and perhaps Hume) is charitable. Rizzio was often late at night in the most private chamber of the Queen, innocently, perhaps, as Mr. Froude suggests, playing at cards. We cannot but think of the famous Hogarth print, 'The Lady's Last Stake.' Darnley asserted, as we learn on the authority of the French Ambassador, writing to his Court, that he had one night discovered Rizzio in the Queen's chamber in a dress, or rather undress, of more than doubtful character. Darnley's word is of little worth, but the impression of her guilt was strong at the time, and was handed down to immediate and less incredulous posterity. Randolph plainly attributes the parentage of James to Rizzio. Our readers may remember the bitter taunt of Milton,—that James had at least one claim to the title of Solomon, that he was 'the son of David.' Mr. Froude has unfolded with great force and skill that which has been often well told before, the dark scenes of the conspiracy, the darker scene of the murder of Rizzio. No one has told so well the story of Mary's conduct after the murder—how she crushed, it might seem, her anguish in her heart, and conducted herself with consummate self-possession, as if she had been a mere actress (and an admirable one she was on this and on all occasions) on a scene of tragic fiction.

'They had caged their bird, but it might be less easy to hold her; and if they believed the Queen was crushed or broken, the conspirators knew little of the temper which they had undertaken to control: sleeping behind that grace of form and charm of manner there lay a spirit which no misfortune could tame—a nature like a panther's, merciless and beautiful—and along with it every dexterous art by which women can outwit the coarser intellects of men.'—ii. p. 258.

In one night she had wound her fetters round her boy-husband; she had lulled him on her bosom to unsuspecting treachery, the basest treachery—the betrayal of his accomplices;  
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the next day she had played on the generous nature of Murray; she had enlisted three gallant and loyal youths in her escape.

"The rendezvous appointed with the horses was near the broken tombs and demolished sepulchres in the ruined Abbey of Holyrood." A secret passage led underground from the palace to the vaults of the abbey; and at midnight Mary Stuart, accompanied by one servant and her husband—who had left the lords under pretence of going to bed—"crawled through the charnel-house, among the bones and skulls of the antient kings," and "came out of the earth" where the horses were shivering in the March midnight air.

"The moon was clear and full. "The Queen with incredible animosity [animation] was mounted *en croup* behind Sir Arthur Erskine, upon a beautiful English double gelding," "the King on a courser of Naples;" and then away—away—past Restalrig, past Arthur's Seat, across the bridge and across the field of Musselburgh, past Seton, past Prestonpans, fast as their horses could speed; "six in all—their Majesties, Erskine, Traquair, and a chamberer of the Queen." In two hours the heavy gates of Dunbar had closed behind them, and Mary Stuart was safe.

"Whatever credit is due to iron fortitude and intellectual address, must be given without stint to this extraordinary woman. Her energy grew with exertion; the terrible agitation of the three preceding days, the wild escape, and a midnight gallop of more than twenty miles within three months of her confinement, would have shaken the strength of the least fragile of human frames: but Mary Stuart seemed not to know the meaning of the word exhaustion; she had scarce alighted from her horse than couriers were flying east, west, north, and south, to call the Catholic nobles to her side; she wrote her own story to her minister at Paris, bidding the Archbishop in a postscript anticipate the false rumours which would be spread against her honour, and tell the truth—her version of the truth—to the Queen-mother and the Spanish ambassador.

"To Elizabeth she wrote with her own hand—fierce, dauntless, and haughty—as in her highest prosperity."—ii. pp. 263-4.

But now, within and without, darker spirits of evil took possession of the mind, the heart, the soul of Mary. Within, vengeance, implacable vengeance for the murder of Rizzio, hatred or rather cruel scorn of her wretched boy husband; we fear sensuality in unbridled power taking perhaps to itself the semblance of just revenge, of just contempt; and without, Bothwell, to whom, worse than any seven evil spirits, the dwelling, thus swept and garnished, was freely, boldly, unblushingly opened. In every period and crisis of Mary's fortunes, the name of Bothwell transpires, everywhere for evil: his very loyalty is without the nobleness of self-devotion; his lust, it would be to degrade the term to call by the sacred name of love. We cannot recount all the occasions on which Bothwell's name forces itself upon

upon us. Mr. Froude would explain the secret of Mary's passion for him.

'Afterwards when Mary Stuart returned, and Murray and Maitland ruled Scotland, Bothwell continued true to his old colours, and true to the cause which the Queen of Scots in her heart was cherishing. Hating England, hating the Reformers, hating Murray above all living men, he had early conceived projects of carrying off his mistress by force from their control—nor was she herself supposed to have been ignorant of his design. The times were then unripe, and Bothwell had retired from Scotland to spend his exile at the French court, in the home of Mary Stuart's affection; and when he came back to her out of that polished atmosphere of devilry, she found his fierce northern nature varnished with a thin coating of Parisian culture, saturated with Parisian villany, and the Earl himself with the single virtue of devotion to his mistress, as before he had been devoted to her mother. Her own nature was altogether higher than Bothwell's, yet courage, strength, and a readiness to face danger and dare crime for their sakes, attract some women more than intellect however keen, or grace however refined. The affection of the Queen of Scots for Bothwell is the best evidence of her innocence with Ritzio.'—ii. pp. 295-96.

This last sentence reads to us as if a spike or so of Mr. Froude's paradoxes were yet unsown.

The awful close—the murder of Darnley—Mr. Froude has worked out with more than his own highest power and simplicity; this simplicity is at once the manifestation and the secret of its power. One touch is new to us. When the Queen quitted Darnley's bedside, after being more than ordinarily lavish, as it seemed, of her fondness, she let drop one fearful sentence.

'The King, though it was late, was in no mood for sleep, and Mary's last words sounded awfully in his ears. "She was very kind," he said to Nolson, "*but why did she speak of David's slaughter?*"'—ii. p. 369.

Surely this betrays something more than the wounded pride of a Queen, the grief and indignation for the cruel murder of a faithful servant. It is the vengeance for a deeper injury.

'Just then Paris came back to fetch a fur wrapper which the Queen had left, and which she thought too pretty to be spoiled. "What will she do?" Darnley said again when he was gone; "it is very lonely." The shadow of death was creeping over him; he was no longer the random boy who two years before had come to Scotland filled with idle dreams of vain ambition. Sorrow, suffering, disease, and fear had done their work. He opened the Prayer-Book, and read over the 55th Psalm, which by a strange coincidence was in the English service for the day that was dawning.

'These are the last words which are known to have passed the lips Mary Stuart's husband:—

' "Hear



' "Hear my prayer, oh Lord, and hide not thyself from my petition.

' "My heart is disquieted within me, and the fear of death is fallen upon me.

' "Fearfulness and trembling are come upon me, and an horrible dread hath overwhelmed me.

' "It is not an open enemy that hath done me this dishonour, for then I could have borne it.

' "It was even thou my companion, my guide, and my own familiar friend."

' Forlorn victim of a cruel time! Twenty-one years old—no more. At the end of an hour he went to bed, with his page at his side. An hour later they two were lying dead in the garden under the stars.'—ii. pp. 369-70.

Of the authenticity of the famous letters, Mr. Froude has not the least doubt; he has enwoven them into his story. And in truth, after Hume's note, it may seem, to the calm inquirer, surprising that they have been held in doubt. Poetry and Romance may still submit to that spell of fascination which held all Scotland, all but Knox, under its resistless magic; the sad fate of Mary may still appeal to what Mr. Froude well calls the 'imaginative sympathies,' which still repudiate the severe truths of history. Fotheringay may disturb the least impassioned judgment, and cast back, as it were, a shade of compassionate doubt, on Kirk-a-Field. But calm, stern Reason cannot swerve from her office.

At all events with Mr. Froude was all contemporary feeling, all contemporary belief. From that moment all was lost to Catholicism in the two kingdoms. This the Catholics themselves acknowledged; many of the English hastened to transfer their allegiance to their last hopeless hope, Catherine Grey.

Spain at once threw up her game in utter desperation. The war against Elizabeth, against England, must be carried on no longer in Scotland; it must be resumed by other means and in other quarters. All the French documents are to the same effect. M. Mignet is at one with Mr. Froude.

It would indeed be difficult, we believe, to produce one authority of the time in favour of Mary. It was not until much, if not all, was forgotten, that a reaction took place; a reaction of romantic compassion for her sufferings, a vague admiration of her beauty, a feeling half of romantic Scoticism, half of religious antipathy to Elizabeth. Mary has, notwithstanding the verdict of friends as well as of foes, continued to bewitch a large part of posterity into belief in her innocence.

- ART. VIII.—1. *A Memoir of Charles James Blomfield, D.D., Bishop of London; with Selections from his Correspondence.* Edited by his Son, Alfred Blomfield, M.A., Fellow of All Souls College, Oxford, and Incumbent of St. Philip's, Stepney. 1863.
2. *Addresses and Charges of Edward Stanley, D.D. (late Bishop of Norwich); with a Memoir.* By his Son, Arthur Penrhyn Stanley, M.A., Fellow and Tutor of University College, Oxford. 1851.
3. *The Life of the Right Rev. Daniel Wilson, D.D., late Lord Bishop of Calcutta and Metropolitan of India.* By the Rev. Josiah Bateman, M.A., Rector of North Cray, Kent, his Son-in-Law and First Chaplain. 2 vols. 8vo. London. 1859.

**F**EW branches of literature are more generally, or, if well executed, more deservedly popular than biographies. The history of almost any man, if truly and simply told, must be full of interest to other men. The causes of this interest are suggested with all his wonted tenderness of touch and truth of sentiment by M. Guizot in his étude entitled 'L'Amour dans le Mariage.' 'Men will have,' he says, 'romances. Why not instead look closely into history? There, too, they would find human life, with its infinitely varied and dramatic scenes; the human heart with all its passions, startling and tender, and, above all, the master-charm of reality. . . Beings who have really lived, who have actually felt the chances, the passions, the joys and griefs, the aspect of which affects us so powerfully, these seen close at hand attract me more powerfully than the most perfect of romances. A human being, the handywork of God, so displayed before us, is far above all the works of man. Of all poets God is the greatest.' \*

Beyond, moreover, this portraiture of human nature, many biographies afford the finest and most real of touches of history. Events are for the most part only interesting to us in proportion to our power of associating with them the feelings, and sufferings, and interests of the men by whom they were accomplished, or on whom they acted; and when therefore biography reveals to us the actors in the great dramas of history as they really lived and felt, and aspired and wrought, it rises to the highest conceivable conditions of interest.

The difficulty of obtaining such biography is extreme. Writers who follow the subjects of their memoirs at a small distance of time are peculiarly liable to imperfect and distorted views.

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\* 'L'Amour dans le Mariage,' 1 and 2.

Mists ever hang the thickest and the darkest around the near objects of the low valleys, even when the giant tops which pierce the sky are bright in their inaccessible distance with the light of heaven. Actual contemporaries are almost certain to be too much interested on the one side or the other in the scenes in which their hero has been an actor to be free from the strong temptation to depreciate an adversary or to exalt a friend. Autobiography is, perhaps, the best form which this species of contemporary history can take. For though there are few who can take so impartial a view of themselves, and of matters round them, as to pen lines like those in which Gibbon has so inimitably sketched himself, yet it is easier for honest criticism to rectify, so to speak, the misrepresentations of the autobiographer than those of the friendly relator as to whose special views and weaknesses it has not such full information.

This is the best justification we know of that of which late years have given so many examples, namely, the writing of the father's life by the son. For this is the next step to autobiography. It is not plainly without its peculiar dangers. The portrait of a mother exhibited in the Royal Academy, in 1862, shows us that there are faces which a son can venture to draw with absolute fidelity, and that there are limners capable of transferring exquisitely to canvas the well-known and beloved lineaments. But there are not many painters like Sir Coutts Lindsay, nor many subjects such as it was his lot to paint. Still such sketching is autobiography at one remove, and we are ready to receive it as such, and are, we believe, able, when so taken, to correct by a calculation which is not in itself difficult, the errors which are likely to find their way into the recorded series.

The works the titles of which we have placed at the head of this article are all of this character; two of them being written by sons, and one by the son-in-law of the subjects of their memoirs. In literary merit they differ widely. Mr. Bateman's *Life of his father-in-law* is detailed, and evidently faithful; but homely and unpretending in its execution. The most living parts are those in which the Bishop is let to speak for himself. The chaplain son-in-law's surrounding text suggests to us the belief that he was sometimes scandalised by the more unrestrained movements of his episcopal superior, and would, if he could, have cut the doublet something squarer, slouched the hat a little broader, and settled the somewhat coarse but kindly and expressive features into a more habitually artificial gravity.

Canon Stanley's memoir is a very different production, though he, too, has a few difficulties to reduce, and a few softening touches with

with which to send forth his portraiture before a critical world. But it exhibits all the excellences of his character and the graces of his pen. There is that power of making the picture live before the eye, which adds so fascinating a charm to all his writings. There is such a loving reverence breathing through the whole, that it soon imparts itself to the reader ; and as he proceeds he is hardly able to blame what he disapproves. As we read of his father's work on Birds, and on his reception of Jenny Lind, we could almost fancy that the Canon of Christchurch found some interest in Natural History, and did not abhor Music. The memoir is what all his writings are—a most skilful, because a concealed, justification of his own opinions, thrown into a sketch of such beauty of language, such tenderness of feeling, and such completeness of execution, that we cannot imagine any reader of well-instructed taste beginning the memoir and laying it down unfinished. We must in truthfulness add, that discerning and observant readers will, we fear, trace already in these pages an inclination to blot out the supernatural element from a revelation which, if it be not supernatural, must be false alike in fact and in intention. It grieves us to remark this tendency ; nor should we have called attention to it here, had we not felt bound to mingle with our praises this note of caution as to every theological composition of this polished and graceful pen.

The memoir of Bishop Blomfield, if it does not sparkle or beguile like that of Bishop Stanley, is on the whole a creditable performance. The *Life* was in more respects than one difficult for a son to write. It would not have been difficult to make it jocular and unbecoming its purpose ; it would have been easy to make it stately, defensive, and dull. It has happily, to a great degree, avoided both of these dangers. If those who were familiar with the Bishop, and knew how his overtaxed mind continually sought some rest in fun and merriment, sometimes complain of the absence of his jests, we must remind them that to have read the written joke, in the midst of the narrative of the *Life*, would have been a widely different thing from witnessing the spark as it was cast forth the candescent metal, and seeing how small was its volume beside the living man who cast it from him. The volumes have, upon the whole, escaped the dulness of a chronicle, whilst they are a real sketch—generally fair, and sometimes almost dramatic—of the events in the midst of which the Bishop's life was cast. They are, too, all sketches which possess the double claim on our attention of representing human life as it was seen by the narrators close at hand for our interest and instruction, and also of affording many materials for the history of the

the years which have but recently passed from us in one, at least, of their most important chapters—the changes which have passed in them on the religious life of this nation.

At first sight, perhaps, it might seem as if the Church of England could not be greatly affected by the character of those who happened at the time to be even her leading prelates. That such an impress of individual bishops can be traced upon the broader flow of the Church Catholic, we all allow. After the lapse of all the intervening years, we see yet upon the bosom of those ancient waters the reflected lineaments of such men as St. Basil, St. Ambrose, St. Athanasius, and St. Augustin. But our Church seems to be so identified with the national life of England, and to be so hemmed in with the narrowing accidents of Articles, fixed Services, and legal decisions, that it scarcely affords a breast tranquil enough to mirror the features of individuals, or sufficiently expansive to be capable of being stirred this way or that by the breath of these separate influences, how strong soever they may be. Yet a closer examination of facts seems to establish a contrary conclusion. Fixed, definite, and national as undoubtedly is the character of the Church of England, yet no one can doubt but that it has been greatly affected by the personal character and individual leanings of such men as Whitgift, Laud, Sancroft, and Tillotson, or, even in spite of his extraordinary weaknesses, of Burnett. We may, then, hope to gather from the records of such more modern lives as these, some important suggestions as to the recent history of our Church.

Few can doubt that, in the last sixty years, there have passed over it many marked and important changes. At the commencement of the century it seemed as if the Church was passing rapidly and hopelessly into a mere department of the State, touching public worship. The suppression of her Convocations had proved a great step in this direction. She had lost all power of corporate action, and, as must be the result, the loss of the power of corporate feeling had certainly and not slowly followed. Further, through a long succession of years her truest-hearted and most able sons had been studiously excluded from all clerical posts of place and power. Such a policy was, perhaps, an unavoidable, certainly a most mischievous, consequence of the Revolution, which placed upon the throne a king *de facto*, whom many of his most conscientious subjects could not regard as king *de jure*, with sufficient certainty to enable them with clear consciences to transfer to him the oaths of allegiance which they had already taken to another. The Court patronage of Hoadley prolonged and fixed this miserable tradition; and the desperate worldliness of Walpole carried

carried it out through his long tenure of power with an almost instinctive sagacity of choice. The long continuance of such a series of appointments must have a palsyng effect upon the whole spiritual body. When the highest abilities, the soundest learning, and the heartiest loyalty, are thus resolutely ostracised, there is first, and of immediate necessity, an enfeebling of the strength which should have been supplied by the resources thus withheld. The effect of this is just what would result from like causes acting on the natural body. There is a loss of tone; a general tendency to apathy and listlessness. Nor is this all. On the men thus marked for unmerited exclusion, even though they may be the most high-minded and patient, such a system works for evil. There is no legitimate room for the exertion of talents which, when they are not spent for the blessing of others, feed inwardly upon the heart of him in whom they dwell. Nor is it possible that they should love as they could have loved it, the community of which they are scarcely admitted to be loyal citizens. They may pray for the peace of the city in which they sojourn, but it cannot be to them as the Zion in which they have delighted with all the intensity of Christian ardour. It is a *dira noverca*, not a loving mother, for whom they are called upon to labour.

The sight, too, of such perpetual wrongs endured by such men as they will endure them, produces a marvellous effect upon the more generous hearted of the young, who ought to furnish the next generation of clergy, and their early aspirations are weaned from the ministry of such a church.

These evil effects may be traced plainly amongst ourselves as the fruits of the tradition begun amidst the troubles of the Revolution, and continued through the days of Hoadley and of Walpole. They may be seen in that which is the sure root of all other weakness—the lowering of the whole doctrinal standard of the Church. The outbreak of the Feathers' Tavern petition was but the coming forth to light and day of what had long been spreading secretly through all ranks of the National Clergy. Every attempt at increased theological liberty through those unhappy days, was only an effort to render possible within the Church the open profession of Socinianism. The same evil leaven is marked as plainly in the degeneracy of a literature which can boast of little in prose better than the 'dull good sense of Tillotson' (as Bishop Berkeley's and the greater Bishop Butler's are in all respects except cases), and in verse the wretched doggerel of Tate and Brady. It is marked as plainly in the base nepotism and worldliness of the greater number of the ecclesiastics; in their miserable cringing to the Minister

Minister of the day; in their occasional mendicancy as to his gifts; and too frequently in what appears to have been their utterly unconscious neglect of the spiritual functions of their Apostolic office. For these were the days in which the custom of visiting but once in his episcopate was established by the Bishop of Winchester; of confirming but once in his archiepiscopate by the Metropolitan of York; of never residing in his diocese by a Bishop of Llandaff. It is marked, as might be expected, in the clergy who served under such bishops, by low tastes, low manners, and not a little of openly dissolute living amongst the mass of parish priests. It is marked, both amongst bishops and clergy, by a neglect of 'the people committed to their charge;' which, as we now look back upon it, appears to be almost incredible. Mr. Blomfield gives us some instances of this degraded standard of episcopal duty. 'The chaplain and son-in-law of Bishop North (1781-1820) examined two candidates for Orders in a tent on a cricket-field, he himself being engaged as one of the players. Bishop Pelham (1807-1827) performed the same duty on one occasion by sending a message by his butler to the candidate to write an essay. The chaplain of Bishop Douglas (1787-1807) did it whilst shaving, and stopped the examination when the examinee had construed two words. The laxity of Bishop Bathurst, of Norwich (1805-1837), known to his Whig admirers as "The good Bishop," with regard to ordination, is well known. The natural consequence of this state of things was a very low standard of theological acquirements amongst the country clergy' (vol. i. p. 60). Bishop Watson's own self-applauding estimate of his episcopal life at Calgarth, in Westmoreland, whilst irreligion and Methodism took possession of his neglected diocese, is too lively a picture of this state of things to be omitted. 'I have now,' he says, about 1809, 'spent above twenty years in this delightful country, but my time has not been spent in idle visitings, in county bickerings, in indolence or intemperance. No! it has been spent partly in supporting the religion and constitution of the country by seasonable publications, and principally in . . . .'. What do our readers of 1863 expect from the aged Bishop?—'building farmhouses, blasting rocks, enclosing wastes, in making bad land good, in planting larches, and implanting in the hearts of my children principles of piety and self-government.'\* It really does not seem to have occurred to him that he had anything else to do. And yet Bishop Watson was a highly distinguished Whig Bishop, and his 'Apology'

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\* 'Bishop Watson's Life,' i. 388.—Blomfield, p. 61.

was considered a masterly performance. But the Life of Mr. Pitt furnishes us with an instance of selfish ravening for wealth in a member of the same order, which is worse than this. It occurs in the correspondence which passed between the Minister and the Bishop of Lichfield and Coventry, the brother of Earl Cornwallis:—

‘Wimpole Street, June 10, 1791.

‘SIR,—After the various instances of neglect and contempt which Lord Cornwallis and I have experienced, not only in violation of repeated assurances, but of the strongest ties, it is impossible that I should not feel the late disappointment very deeply.

‘With respect to the proposal concerning Salisbury, I have no hesitation in saying that the see of Salisbury cannot be in any respect an object to me. The only arrangement which promises an accommodation in my favour is the promotion of the Bishop of Lincoln to Salisbury, which would enable you to confer the Deanery of St. Paul’s upon me.

‘I have the honour to be, &c.,

‘T. LICHFIELD AND COVENTRY.’

‘Downing Street, Saturday Morning, June 11, 1791.

‘MY LORD,—On my return to town this afternoon I found your Lordship’s letter. I am willing to hope that on further consideration, and on recollecting all the circumstances, there are parts of that letter which you would yourself wish never to have written.

‘My respect for your Lordship’s situation, and my regard for Lord Cornwallis, prevent my saying more than that until that letter is recalled your Lordship makes any further intercourse between you and me impossible.

‘I have the honour to be, &c.,

‘W. PITT.’

‘Wimpole Street, June 11, 1791.

‘SIR,—Under the very great disappointment which I have felt upon the late occasion, I am much concerned that I was induced to make use of expressions in my letter to you of which I have since repented, and which, upon consideration, I beg leave to retract; and I hope that they will make no unfavourable impression upon your mind.

‘Whatever may be your thoughts respecting the subject matter of the letter, I trust that you will have the candour to pardon those parts of it which may appear to be wanting in due and proper respect to you, and believe me to have the honour to be, &c.,

‘T. LICHFIELD AND COVENTRY.’

Let any man read the early life of John Wesley, if he would

1791, p. 125.

gain



gain any due estimate of the then current state of things. Or, if he would see how even amongst the best Bishops, down almost to our own days, all living consciousness that they were the spiritual instructors of the people had well nigh faded out of sight, let him weigh the fact that with London multiplying all but visibly under his eyes, Bishop Porteus bequeathed a princely fortune to a nephew, but never built or endowed a single church in the vast metropolis entrusted to his charge; whilst so little was he a preaching bishop, that he could reply to the request for a charity sermon: 'I only give one in a year, and the next is promised.' \*

These accordingly were the days in which the bulk of our mining and manufacturing population were alienated from a Church, which, indolently folding its hands, left them to find amongst the Methodists their only religious teachers. These were the days in which the great middle class, so distinctive a feature of our nation, were largely lost by like causes through all our increasing towns to the Church of their fathers. These were the days in which, like the mighty ice-stream of the glacier, which moves slowly on because the temperature of all its mass lingers at the freezing point, the religion of society amongst us had sunk sadly down to the frozen point of a lifeless, even where it was a respectable, profession of belief in Christianity.

The coming reaction against this state of things awoke first in what has commonly been called the Evangelical party. Of that party, in its merits and its defects, the life of Bishop Daniel Wilson, of Calcutta, is in many respects a sufficient exposition. Warm-hearted, zealous, earnestly pious, but withal shallow and eminently technical in his views of religion, with an amount of self-importance which often invested even the most sacred subjects with a hue so simply personal, that it made him at once unawares exquisitely comic and most unintentionally irreverend; † possessed so strongly by party spirit, that even his kind heart could not always save him from harshness and injustice, he manifested, we think, in his administration of the great diocese of Calcutta what his scheme of theological life could, and even more signally what it could not, accomplish.

The biography of such a man in such a post cannot but be full of interest; and we should not do justice to him or to his biographer if we did not add that it can hardly be read without

\* Bishop Blomfield, i. 61.

† forget Lord Macaulay's narrative of the family prayers in which, asking for a chaplain embarking for Madras that he might be sick on the voyage, added, with this characteristic touch, 'as Thou knowest Thy servant the Bishop was.'

great profit by any one who desires to gain good from it. Our readers will hardly enter into what we have said and have got to say without having before them a brief abstract of this volume and its biography.

Daniel Wilson was born in Spitalfields in 1788, of a family whose spiritual authorities were Whitfield and Richard Cecil, and which attended sometimes their parish church, sometimes Mr. Romaine's, sometimes a Dissenting chapel in White Row, sometimes the Tabernacle in Moorfields (*Life*, p. 4). The natural fruit of this uncertainty of religious teaching was seen in the youth of the future bishop. He entered the service of a kinsman of his own name, a silk merchant in Cheapside, and is described whilst there as being 'sceptical in his views, impetuous in temper, with passions strong,' and so, as one 'who walked in the counsel of the ungodly, stood in the way of sinners, and sat in the seat of the scornful' (*Life*, p. 6). But out of this state he was early roused. In a young man of such a character as his, the struggle through which he passed into his subsequent condition could not but be severe; and the peculiar tenets of the school in which he learned the austere but blessed lesson of repentance were in the process strongly marked upon him. They fell in moreover with his natural inclination, and were deepened by the circumstances of his life. His change of principles led him even naturally to long for the ministry as his profession. And when, after some opposition, his friends yielded to this wish, he entered on his academical career at St. Edmund's Hall, then the chosen seat of his exclusive sect at Oxford. His first curacy was at Chobham under Cecil—the one clerical genius of his party; and in due time he succeeded to the tutorship of his old Hall. Here as elsewhere his tendency to egotism showed itself in amusing outbreaks, and he was so much the most donnish amongst dons that from his diligent enforcement of their use he earned for himself the soubriquet of 'Bands Wilson' (*Life*, p. 67). Hence he moved as the successor of Mr. Cecil, in 1809, to St. John's Chapel, Bedford Row, then the Metropolitan centre of his party.

His 'habits and tastes' are thus sketched by his biographer. 'He was always a student. . . . The imaginative faculty cannot be regarded as predominating in his mind. Though living at the very time when the tales and novels of Walter Scott were exerting all their witchery, it is doubtful if he ever read one of them. . . . The hymn was perhaps a greater favourite than the poem. . . . he loved to hear them sung. . . . His voice would join in the praise, but it is impossible to say that it added to the harmony. He had no ear for music, and this

this defect. . . . extended to the pronunciation of languages ; for those which he knew perfectly. . . . he yet could not pronounce correctly, &c.'—p. 74.

With all these disadvantages, it is well worthy of remark that, through his real piety, his vigorous understanding, and his constant study, he held with power, success in its best sense, and increasing popularity, the pulpit of St. John's from 1809 to 1824. This is well sketched by Mr. Bateman. 'He stood as God's minister to do God's work. He was an earnest man when earnest men were comparatively rare. He fully preached the gospel. . . . He was steadfast . . . . and moderate. His manner was natural. His enunciation was remarkably clear and distinct. His action varied with the subject. . . . Those who have known him in the decline of life . . . . have no idea of his power in the pulpit of St. John's (p. 98). The congregation was calculated to draw out all the powers of the minister. . . . They were gathered from all parts of the metropolis. . . . Amongst the regular attendants were the Thornton family. . . . There sat Charles Grant with his family and two distinguished sons. . . . There also sat Zachary Macaulay accompanied by his son. . . . Lawyers of note . . . . were pewholders. . . . The good Bishop Ryder often attended with Lord Calthorpe and with Mr. Bowdler. . . . Mr. Wilberforce was frequently present, with his son Samuel "to take care of him"' (p. 101).

The labour and excitement of this life bowed down a naturally robust constitution, and Wilson was already a weakened man when, in 1824, he became vicar of Islington, where he remained until in 1832, he was nominated by Mr. Grant (afterwards Lord Glenelg) to the bishopric of Calcutta. The circumstances of his appointment were in one respect not a little curious, and highly indicative of his character. He volunteered for the post. 'Mr. Wilson's mind,' says his biographer, 'was full of India. Anxious to use the influence he possessed in order to secure a fit successor to the vacant see, he wrote to Mr. Grant pleading for the appointment of a man—(1), of a thorough and decided piety ; (2), of good talents ; (3), of amiable temper ; (4), of some station in the Church' (p. 148). Having heard of its being offered to Dr. Dealtry, Chancellor Raikes, and Archdeacon Hoare, and declined, 'the thought, he says, came into his mind. . . . "Here am I, send me ;" and he wrote again to state that if . . . . no one else could be found he was ready to go' (p. 148). This seems to have been on the 11th of December. 'A long period of uncertainty followed, during which his feelings varied from day to day' (p. 149) ; and it was not till the 27th of March, after an interval of fifteen weeks, that the desired offer was made

to him. His consecration soon followed, and on the 19th of June he sailed for what was called the Bishopric of Calcutta, but which really involved the oversight of such an extent of our colonial dependencies, that it has already been divided into no less than the seventeen dioceses of Calcutta, Madras, Bombay, Colombo, Sydney, Melbourne, Newcastle, Adelaide, Perth, Tasmania, New Zealand, Wharapu, Wellington, Nelson, Christ Church, Brisbane, and Goulburn, and ought to be into many more if they are to be worthy of a name which implies practical spiritual superintendence. For a quarter of a century Bishop Wilson discharged to the utmost of his powers the duties of this gigantic charge. His labours were unsparing, his zeal unwearied, his munificence unbounded. The record of his visitations is full of interest. We cannot doubt that his intrinsic goodness and devotedness to his duties quickened many an individual soul. We thankfully own that it was mainly due to his munificence that a cathedral was built at Calcutta. But we are compelled to say that, tried by its highest results, his episcopate was in great measure a failure.

If we except the Cathedral, no one permanent result of it is even claimed by his biographer. He lived through the great crisis of our Indian empire, and he left no mark of his administration upon the mighty Oriental episcopate. The causes of this failure are to be found in the action of his peculiar principles upon his work and his character. All, in his view, was to be done by the promulgation of his own spiritual views and the force of his own personal religion. He had no idea of the universal undivided episcopate: no such vision of the living Church of God as swallowed up his own individuality. This terrible lack in his religious views acted with deadly effect on his naturally egotistic character, and upon intellectual powers which, with a considerable amount of spasmodic strength, were constitutionally narrow. Everything which concerned himself became great in his eyes: his very office seems to derive its dignity from his filling it. Hence the Man ever overpowers the Bishop. And in his rule he is capricious, one-sided; sometimes overbearing, sometimes subservient; swallowed up in present personal work; meditating no great things; taking from his high vantage ground no wide surveys of the future; but engaged in contests as to his own personal power which drew out all the worst parts of his character. The love of the relative and the admiration of the biographer cannot blind Mr. Bateman to these facts. 'As for his failings,' the Memoir says, in its conclusion, 'they will have been discerned by the reader long ago. They all lay upon the side of hasty impulse, quick action, sharp words,  
want

want of consideration for others, a sanguine temperament, something of egotism, and occasional inaccuracy of statement' (p. 542). 'If,' he continues, 'the reader has the heart to dwell upon them, after the deep self-abasement they have caused and the lowly confession they have called forth, he is of course at liberty to do so. They are not denied' (ii. 542).

We have no heart to dwell on these infirmities, so frankly owned, in depreciation of the Bishop's character. They were the human frailties of a good if not of a great man.

So far as his personal history goes, we would close it with the touching and instructive history of his end recorded in Mr. Bateman's pages. 'We all love you and pity you in your weakness, but rejoice in your firm faith,' was well-nigh the last farewell of Archdeacon Pratt to the departing Bishop. This woke up 'many humiliating remarks about himself, showing that the broken heart and contrite spirit was the sacrifice he was offering to God.' . . . . He was asked to send a summons at any time during the night, if he wanted anything, and was then recommended to compose himself to sleep. 'Sleep!' he replied, 'I am asleep already. I am talking in my sleep;' and in that sleep his spirit passed painlessly away. 'Without a struggle or a sigh the soul had left its earthly tenement, and in that hour the Master had granted the oft-repeated prayer that his servant might end well' (p. 525).

Such a close of life throws back a glorious light upon the chequered scenes through which it has led us. From the heights which separate the coming from the past, we look back upon the various stages of the long day's pilgrimage; and as the rays of the setting sun gild their various outlines, we forget the softened troubles of the past in the glory of the present; and criticism is well-nigh disarmed of its judicial power by the spontaneous rising from the heart of the unbidden prayer—

'*Sit anima mea cum Bedello.*'

But though we may deal thus with the man, yet we must take a sterner estimate of his work. The best part of that work, always marred by the presence of the narrow spirit of a party, seems to us to have been accomplished in his earlier days. There was at that time a distinct vocation before those with whom he thought and acted. The first embalmers were still engaged in their preliminary labours, and the very faults of his character in some respects qualified him for his task; for a tendency to egotism repelled all doubts of his being in the right, and no nice sensitiveness of feeling interfered with a line of conduct which always was decided, though sometimes it bordered upon coarseness.

ness. Such a man thoroughly in earnest, with considerable powers of language, and with a robustness of mind which rose almost into the faculty of command, could not be thrown as a preacher amidst the men of business of the metropolis without doing to a great extent what at the time specially needed to be done—the awakening of lethargic morality into a living earnestness of piety. The Bedford Row Chapel was the scene of his glory. Even at Islington broad shadows began to cast their darker lines athwart the light. There too, no doubt, he awoke a new spirit of earnestness; he built new churches; broke up the unmanageable vastness of the parish into manageable districts: but the exclusiveness of the man and of the school became more apparent and more mischievous. His appointment to Calcutta was, we think, a great mistake. He was evermore haunted by his old self, and could not rise to the vast calls of his new position. The Metropolitan of India was but the Daniel Wilson of Islington. The special work of his youth had been ere this accomplished; and the householder of that wide family had not, as so few have, the rare gift of being ‘wise’ enough to ‘bring forth things new’ as well as ‘old.’ He administered the diocese as he had rebuked his curates, or struggled with his churchwardens. His charges were but the expansion of the single dogma for which, when he was young, he had to fight. To guide the quickening mind of India, he had but the maxims of a party; and to form that mighty archiepiscopate but the traditions of an expiring sect. That this narrowness of mind interfered materially with the success of his episcopate, we cannot for a moment doubt. Surely upon the wide field of India, there was room for employing, with the heartiest support, men of the greatest powers and the most earnest Christianity, even though they did not adopt the exact phraseology of Islington. Yet the Bishop’s conduct to Professor Street proved that no such breadth of view ever animated his mind. Signs of this intense narrowness are continually making themselves manifest. ‘Caird’s Sermon preached before the Queen’ had ‘no light of Christ shining in the discourse’ (p. 499). Prescott’s writings delight him, and he adds, ‘I wish he was a Christian man’ (p. 501). ‘Milman’s sixth volume will do immense good as against Popery; but he sadly fails in spiritual and evangelical views, as all the ecclesiastical historians do, except Milner’ (p. 502).

This was not the temper to convert India, or to leave on the records of the future the glorious title which might have been won of ‘the English Xavier.’

The biography of Bishop Blomfield brings us into contact with a mind and character which were cast in a wholly different mould.

mould. Sprung like Bishop Wilson from the middle rank of society, upon him too its stamp was marked with an unmistakable plainness. But the years which were given by the one to the pursuits of business were spent by the other in the refining process of cultivating a varied and exact scholarship. So notorious at the time amongst his equals was the severity of his youthful studies that he was greeted in a long vacation with the indicative remark, 'Why, Charles Blomfield, I believe if you were to drop from the sky you would be found with a book in your hand!' (p. 6). The results of these scholastic labours earned for him his first renown. His university distinctions, which followed each other with rapidity, were crowned in 1809 by his obtaining a fellowship at Trinity; and these only prepared the way for his entering with new zeal and still greater success upon the conflicts and successes of the world-wide field of critical literature. He became the editor of *Æschylus* and the correspondent of Hermann, and the 'learned and deeply respected Mr. Blomfield' of Dr. Parr (vol. i. p. 46). But his mind was of far too practical a turn to find its full satisfaction in critical controversy. He was already in 1810 a clergyman, and the strong claims of clerical responsibility soon largely occupied his time and thoughts. Severe family afflictions deepened his religious character, and he exchanged for life the task of rectifying corrupt choruses for the cure of immortal souls. But to the end of his days there abode with him the strong flavour of his early acquisitions; and it is no small praise of the amount of his scholarship to say that never from this time returning to its cultivation save as the occasional relaxation of a life of unusual toil, he still held to the end an honourable equality with many who never quitted his own soon-abandoned pursuits. His advancement to the higher posts of the Church was continuous and rapid. From the humble rectory of Dunton, in Buckinghamshire, where he had added to the care of his small benefice the office of a private tutor and the diligent discharge of the office of a magistrate, he was moved in 1817 by Lord Bristol to the benefices of Great and Little Chesterford and Tuddenham. The watchful eye of the future Archbishop of Canterbury (Howley) had, moreover, already marked his course, and by him in the same year he was appointed his chaplain, and in 1822 Archdeacon of Colchester, having meanwhile, in 1819, been nominated by Lord Liverpool to the rectory of St. Bololph's, Bishopsgate. He remained Archdeacon but two years, being then raised to the bishopric of Chester. The last and somewhat hasty steps of his preferment awoke the following epigram, we are told, from one of the boys of the Grammar-school of his native town of Bury, which is so much

much like one of his own jocose effusions that we must find a place for it here :—

‘ Through Chester-ford to Bishop’s-gate  
Did Blomfield safely wade ;  
Then leaving ford and gate behind,  
He’s Chester’s Bishop made.’\*

He was four years at Chester, and then translated to the See of London in 1828, the first year of the Duke of Wellington’s administration. The character of his episcopate, in its leading features, was the same from first to last. It was marked by extraordinary exertion,—by the performance of a vast amount of work,—by remarkable success in some most important departments of his difficult duties. It produced in many respects most beneficial effects upon the Church around him. It was, at the same time, we think, tarnished with some considerable defects ; and, as we desire not to pronounce an eulogy, but to weigh dispassionately the merits and defects of a great public servant, we shall not shrink from marking on our canvas the darker lines, without which the portrait must lose all its individuality of likeness.

The diocese of Chester needed and received the full burst of his zealous ardour. There was much in it to reform, and he set himself with all his might to reform it. One extract may show the standard of clerical duty which was tolerated amongst the clergy of that diocese. The Bishop had been forced to rebuke a clergyman for drunkenness, and received in reply the excuse, ‘ But, my Lord, I was never drunk on duty.’ ‘ On duty ! ’ exclaimed the Bishop, ‘ when is a clergyman not on duty ? ’ ‘ True,’ said the other, ‘ I never thought of that ’ (Memoir, i. p. 105).

He had no party views ; but he was resolved to make the Church in his diocese the Church of the diocese, and to gain this end he must make its clergy do their work. Perhaps in the impetuosity of his own pure zeal, he assailed some of them somewhat too rudely. To use his son’s words, ‘ in speaking or writing on the subject of clerical duties, the Bishop would sometimes convey his admonitions with a certain sharpness of manner which concealed the real kindness of his heart ’ (vol. i. p. 104). Nor had he yet had the opportunity of quite casting off those habits and modes of thought, which had of necessity been bred by his years of private tuition, and which make the school-master’s office for the most part so singularly bad a preparation for that of a bishop. To a considerable extent this interfered with

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\* Life, i. 95.



his first endeavours to reform his diocese, by the opposition which it raised amongst certain sections of the clergy. It was at this time that Sydney Smith, who, through the rest of his life, ever hung upon his flanks with jests and raillery, versified his first charge into a stanza of more than 'Pindaric' irregularity of metre,—

'Hunt not, fish not, shoot not,  
Dance not, fiddle not, flute not;  
But, before all things, it is my particular desire  
That once, at least, in every week you take  
Your dinner with the Squire.'

Nor did his tutorial character escape the witty Canon, when the doings of the Ecclesiastical Commission afterwards excited his 'divine wrath.' 'He is all of a sudden,' he says as he portrays his rise, 'elevated from being a tutor, dining at an early hour with his pupil (and occasionally, it is believed, on cold meat), to be a spiritual Lord: he is dressed in a magnificent dress, decorated with a title, flattered by chaplains, . . . and this often happens to a man who has had no opportunities of seeing the world, whose parents were in very humble life, and who has given up all his thoughts to the Frogs of Aristophanes and the Targum of Onkelos.'\*

Amusing stories still survive of the petty resistances which the Bishop's sometimes hasty reproofs drew forth from his perverse clergy. Thus, for instance, being, we are told, scandalized by the rapidity with which the Morning Prayer was being said by the parish priest in a church where he was himself about to preach, he, somewhat unguardedly, sent the churchwarden to the offender with an expression of his desire that he would not read so fast. The message was delivered, and the pace augmented. But when, not without some indignation, he proceeded afterwards to rebuke the offender, he was met by a reply delivered in the most courteous manner—'I did not think it possible that my bishop could send me such a rebuke in the midst of the service by such a bearer; so I supposed he had mistaken the message, and that business requiring you to hasten elsewhere, you requested me to read fast.' As his son well says, 'such a bishop could hardly fail to have enemies, and enemies he had . . . he was stigmatised as overbearing, tyrannical, meddlesome, hasty, inconsiderate. . . . His detractors, however, were after all few in number; the great majority respected his zeal, even when they did not imitate it' (vol. i. p. 105). The essential kindness of his heart—his un-

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\* Sydney Smith's Works, vol. ii. 266.

bounded liberality—the entire and simple identification of his efforts with the Church of which he was a minister—and above all, his being himself the first in the labours to which he was endeavouring to excite others—soon disarmed this opposition of its power; and far above the creeping mists bred of lethargy, and hanging heavily over the dull flats of idleness, rose clear and bright the fair fame of the young Bishop with his noble aims and his lightsome labours. He ‘set himself to work in his new position with all his characteristic energy. The Diocese of Chester then included not only the teeming population, manufacturing or agricultural, of Lancashire and Cheshire, but the scattered and primitive Westmoreland “statesmen” who tended their mountain-sheep along the slopes of Helvellyn and Loughrigg; or cultivated the small farms which nestle in the valleys of Grasmere and Langdale.’ (Life, i. 99.) To the wants of all he sedulously applied the strong arms of love and labour, and to an unusual degree won universal regard. All this was a good preparation for the wider sphere of labours which opened to him in the See of London. Happily for it and for himself, he came to it, like most of his predecessors, tempered by episcopal experience, having rubbed off the schoolmaster before he had to deal with the clergy of the metropolis.

This change of labour brought him also into immediate connection, soon ripening into intimate relations of close personal friendship, with a body of lay Churchmen, to whom, on his part, he imparted much, and from whom he received more. In the dearest times, the Church of England has ever kept alive in the shrines of some faithful hearts the sacred fire; and so there has been handed on, often unseen without the circle of their own good deeds, the tradition of sound belief and holy practice. Such men in their generation were Robert Boyle, and Robert Nelson, and W. Stevens. Such men the bishop found in Joshua Watson and in some whose living names must yet be written. To them the ardent spirit of the busy Bishop was as the falling of the spark on the prepared train; whilst on him their calm, patient, gentle temper, exercised exactly the control he needed. It is delightful to follow both in the Bishop’s biography and in the very deeply interesting life of Joshua Watson which we owe to the classical pen of Archdeacon Churton the record of the great results which flowed from this happy union of God’s different gifts to different men united in the common bond of a hearty Churchmanship. Amongst his various deeds of good throughout his diocese, none is more identified with the name of Bishop Blomfield than the great Church-building movement he inaugurated. What the fruit

fruit of that was, may be read in the record of the change wrought in the single district of Bethnal Green, as it is narrated by his son :—

‘Before the erection of the new churches Bethnal Green was the resort of the worst characters, and the frequent scene of disgraceful riots. On the spot now occupied by St. Thomas’s church, with its schools and parsonage-house, and by the model lodging-houses which the munificence of Miss Burdett Coutts has erected for the labouring population, were situated the notorious “Nova Scotia Gardens,” in which resided the infamous “Burkers,” May, Bishop, and Williams, who procured subjects for dissection by secret assassination, and were convicted of the murder of a friendless Italian boy, in 1826 [this is the date as it stands in Mr. Blomfield’s pages, but the real date is 1831]; after which time the place was known in the neighbourhood as *Burker’s Hole*. . . . .

‘The change in the character of the people was strikingly shown in their altered mode of receiving Mr. Cotton’s benevolent scheme. When it was first started, the persons who went round to collect subscriptions for it were met with jeers and insults; and when the first stone of the first church was to be laid, the people, regarding the movement as an unwarrantable intrusion, assembled in crowds to jeer and scoff; and an infuriated bull was wantonly let loose to disturb the procession. But when the first stone of the ninth church was laid, the temper of the people had entirely changed; thousands lined the streets, decently attired in their Sunday clothes, and showing every mark of respect, and the working men bowed and took off their hats as the procession passed.’—Vol. i. 245.

In his Charge of 1846, the Bishop was able thus to review the result of these exertions:—‘Provision has thus been made for the erection of sixty-three new churches, of which forty-four are completed, or are in course of erection. . . . These churches will contain altogether about 65,000 persons, and will furnish the means of attending Divine service, once in the day, to 130,000’ (vol. i. p. 248). By the close of his episcopate, this number had been largely increased; and whilst all the years of his predecessors in his office were scarcely marked by the erection of a single church, he was able, when he resigned the see, to point to well-nigh 200 churches consecrated by himself. This movement was far more than a mere supply of local spiritual deficiency. It was the wakening up, within the Church, of a thorough consciousness, that, to be true to herself, she must provide for the spiritual life of her children; and in arousing and fixing this conviction, few men had a larger share than Bishop Blomfield.

Nor was this by any means the only great revival as to which he was a chief instrument in leading the Church to feel its responsibilities.

responsibilities. The wide extension of the colonial episcopate was in a great degree his work.

In the more directly pastoral parts, too, of his office, so far as concerned its public exercise, he always shone. His voice was as clear and sweet an organ of speech as can be conceived, and admirably expressed the ready pathos which in his sermons, and especially in his addresses to the young, ever mingled with the direct teaching of the Bishop.

In the pulpit, in public meetings, and in the House of Lords, this gave him an immense advantage, and he employed it abundantly in discharging the great duties of his office. Few were more constant preachers, few more ready, by personal service at meetings for charitable or religious purposes, to stir up the slumbering zeal of a rich and luxurious generation.

In that more public and semi-political life which forms so important a part of the duties of every English Bishop, and in some respects pre-eminently of the Bishop of London, he was the same man that we have seen him in his diocese.

It was clear to all that his sole object was to increase the moral and spiritual efficiency of the Church of England. With powers of speaking of the highest class, he used them not to seek for fame, or effect, or personal aggrandisement, but simply as instruments for discharging that work which he believed they were given to him to perform. Sir R. Inglis, a very fastidious as well as competent critic on such a matter, once remarked that often as he had heard the Bishop speak in public, he had never heard one word fall from him unworthy of his position as a Prelate of the Church. And in this department of his work he laboured incessantly. The age and the retiring habits of the two Primates, both of whom confided thoroughly in him, threw on him more than the large share of the Church's public business which ordinarily devolves on a Bishop of London; and for the latter part, at least, of their lives he obtained their concurrence in whatever he undertook. The bills which he carried through Parliament attest his unceasing diligence, and some at least of them remain as monuments of his successful efforts for the benefit of the Church.

He was, too, in a great degree the instrument of restoring to the Episcopal Bench in the House of Lords as a deliberative body that weight and consideration which it is so important that it should possess. When he entered the order the power of public speaking was at a very low ebb amongst its members, and it had, in consequence of its being safe, become the favourite amusement of one or two Whig Peers to bait a Bishop before that venerable body. There are those still living who remember the sensation made by his first speech, and how, after he had uttered a few sentences,

sentences, one well-known Peer hurried into the writing-room and exclaimed, in language more nervous than refined, to the late Lord King, who led this unworthy sport, 'Make haste into the House, there is a devil of a Bishop up.' Though we may perhaps think Daniel Webster's estimate of his powers somewhat exaggerated when he said that 'in dignity of manner and weight of matter no speaker in Great Britain was equal to the Bishop of London' (Life, vol. i. p. 124), yet we should undoubtedly place him in the first rank of debaters. He had not, indeed, the tenacious grasp and iron logic of the Bishop of Exeter, or the sustained eloquence and varied resources of the Bishop of Oxford, or the powers of illustration or generalization which are essential to the highest oratory; he could not, with the mighty masters of this wonderful art, thunder and lighten, yet, as Bishop Copleston wrote of him, 'he was ready, fluent, correct, always addressing himself to the point, never seeking admiration by sarcasm and ornament, and rhetorical flourishes' (Life, vol. i. p. 124). He reached very nearly to the highest standard of that business-like, facile, clear and pleasing speaking, which is the most effective, if it is not the most highly esteemed, in the assemblies of Englishmen; and though his delivery was ungraceful, all that he uttered was spoken to the best advantage in a singularly musical voice and with not infrequent exhibitions of deep feeling on his own part, which, from their evident naturalness, appealed straight to the listener's heart, and aided not a little the argument which it supported in bringing them to the conclusion which the speaker desired. We are disposed to place in the first rank of all his parliamentary efforts the speech which he delivered in the House of Lords in July, 1839, upon Archbishop Howley's Resolutions on National Education. It was a subject on which he was deeply in earnest, and he cast off in this instance a constitutional dread of opposing what claimed to be liberal measures with a completeness, the lack of which certainly weakened materially some of his main efforts.

Nor was this activity in public business limited to his duties in the House of Lords. In the reform of the Poor Rates no less competent a witness than Mr. Nassau Senior says, his 'services, both on the Poor Law Commission and afterwards in carrying the Poor Laws Amendment Bill, cannot be too highly estimated. He brought to the meetings of the Commission great knowledge both of principles and of details, unwearied attention, and undaunted courage. . . . I do not believe that we could have agreed to our Report . . . if his courage and authority, and that of the late Bishop Sumner, had not supported us' (vol. i. p. 204).

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In the mixed questions of social and ecclesiastical matters he was equally alive. He was one of the principal founders of King's College, London. He took the main part in all that action for Church Reform which led to the establishment of the Ecclesiastical Commission. For many years, indeed, he was one of its foremost members.

In the working of this Commission his son claims for him not only the undoubted merit of activity and zeal, but also an immunity from having shared in all the erroneous councils which have at times brought upon it much popular discredit. We think that he has somewhat exaggerated the actual amount of the Bishop's services; and, in endeavouring to rescue him from all blame, has fallen into the more serious error of not rightly representing the facts of the case on one important matter.\* There is no doubt that the early decisions of the Ecclesiastical Commissioners were to a very great degree influenced by the Bishop. Though we are disposed to smile at the filial blindness which twice quotes Sydney Smith's jest about pens being nibbed only till he came, as though it were told in proof of his transcendent power, and not of his 'ungovernable passion for business and constitutional impetuosity.'† But Mr. Blomfield has fallen, as to this matter, into a more serious error, which we hope, if the work comes to a second edition, he will correct. He says (vol. i. p. 228), 'But with regard to the subject of this memoir, it may be remarked that it was only during the more palmy and promising days of the Commission that he was the prime mover of its designs: in its subsequent decline and fall he took a much less prominent part. . . . When it was found parsimonious where it was expedient to be liberal, and liberal where it might well have been parsimonious; when . . . the palaces of Bishops swallowed up the hopes of lean and houseless incumbents.'

We confess that we were not a little startled when we read this passage in the *Life* of Bishop Blomfield. This adoption of the charges of Sir B. Hall in such pages made us shrink from the dagger's point, with our 'Et tu Brute!'

The attempt to save the Bishop from the odium of having provided out of the Episcopal fund fit residences for the new or remodelled sees, by saying that the sums so laid out were spent, not in 'the palmy days,' when Bishop Blomfield reigned supreme at the Commission, but when his influence had been diluted by the presence of other Bishops, has led us to look into the Reports of the Commissioners as they have been laid before Parliament, and how far they bear out the statement of 'the

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\* Vol. i. 223; vol. ii. 184.

† Vol. i. 218.

Life' our readers shall judge for themselves. We extract the following list of grants to Bishops' palaces from the Appendix to the Third General Report of the Commissioners laid before Parliament:—

1. The palace at Ripon drew from the Episcopal Fund 14,621*l.* 15*s.* 6*d.*

2. The house and demesne lands at Riseholme, near Lincoln, cost 52,194*l.* 13*s.* 3*d.*; 45,982*l.* 6*s.* 9*d.* being raised by sale of estates, and 6212*l.* from the Episcopal Fund.

3. The purchase of Stapleton for the bishopric of Gloucester and Bristol cost 23,627*l.* 5*s.*

4. The building a chapel and enlarging Cuddesden Palace is chargeable at 4800*l.*

5. Alterations at Hartlebury Castle cost 7000*l.*

6. A palace was built at Llandaff for 7125*l.*

7. Maudreth Hall, for the see of Manchester, cost 20,000*l.*

Now, first, we must say, as to all of these, that we cannot understand from what Bishop Blomfield's memory was to be shielded, unless the sums spent under this head were extravagant in themselves or laid out in purchasing unfit residences.

For the larger bishoprics were, by Act of Parliament, mulcted especially to endow the smaller, and the providing a suitable residence must, of necessity, be the most important part of such an endowment; and this, therefore, until Parliament merged it in the common fund was really a primary charge upon the Episcopal Fund. Thus the founding of the sees of Ripon and Manchester made it absolutely needful that a house of residence should be provided for each; and the raising Oxford and Llandaff to be sees on which the Bishops could reside, without, as formerly, other benefices with large houses being held in commendam with them, made it essential that their see-houses should be made fit for the exigencies of a Bishop's residence. For let it be remembered, that though there be no need of a magnificent or a sumptuous dwelling for a Bishop, there must, if his duties are to be performed, be rooms enough in his house for the occasional gatherings of laymen there and for the ordinary reception of the clergy of the diocese, the candidates for Orders, and the like.

These are what, so far as we can gather from the returns, have in the main been provided by these funds. Nor could we ever hear that, down to the latest of these grants, any one of them was objected to by Bishop Blomfield. But for some peculiar circumstance, we do not believe that the clamours which have of late been raised, and to which Mr. Blomfield's words give so much currency, would ever have been heard. We believe  
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that the outcry arose altogether from what was known of two of these cases. The two to which we allude were Riseholme and Stapleton. On Riseholme, in the first place, the large sum (including the demesne lands) of 52,194*l.* 13*s.* 3*d.* was sunk. This of itself created an outcry; many thought that the money came from the fund, whilst all felt that it had been laid out unproductively; for when it was known that immediately to the south of the noble Cathedral, in a commanding and admirable situation there still stood the old palace, inhabited by one of the Bishop's officials, and quite capable at a reasonable cost of having been made the existing episcopal palace, the greatest dissatisfaction was felt at a house having been purchased at so large a cost two miles distant from the cathedral city. We cannot wonder at the discontent which this particular case excited, for it actually was a most mistaken selection of a site for the new palace. The second bad case was the purchase of Stapleton for the See of Gloucester and Bristol. Here, too, there was a large outlay (23,627*l.*), and with a most incommensurate result. For this house again was most inconveniently distant from the Cathedral, and in itself so ill-suited to its purpose that, on Bishop Baring's appointment, it was sold, realising only 12,000*l.*

To these two cases we confidently assert that the clamour against the Commissioners' acts as to episcopal residences may be distinctly traced. Yet, upon examining the reports of the Commission, we find that both these cases occurred 'in its palmy days,' whilst Bishop Blomfield governed it; and further, that, in both of them, houses were purchased for the two bishops whom Bishop Blomfield had obtained as his special coadjutors, Bishop Kaye and his own old friend and assistant Bishop Monk. Bishop Blomfield's high character is not to be raised by urging against an unjust popular prejudice such a defence as his son has attempted. It is, we feel confident, the very last plea he would himself have put on record against a charge which blind clamour raised, and which such an answer could only render more malignant.

A life of such incessant occupation might seem to be scarcely compatible with a large development of the amenities of society and of the more blessed relations of family life. But it was not so with Bishop Blomfield, as those who knew him in his hours of social relaxation can abundantly testify. To the end he attended with undiminished relish the semi-literary gatherings of 'the Club,' the evenings of which are so well depicted by one of its distinguished members, that such a history of this social gathering is worth, in passing, the notice of our readers:—

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'In conjunction with Sir Joshua Reynolds, Dr. Johnson had formed a small but well-selected knot of friends, which proudly, without any distinctive epithet, was called or called itself "THE CLUB." It has continued in regular succession, and with no sign of languor or decay, to the present year, preserving in three large folio volumes authentic annals of its course. . . . . Among the original members of "the Club," when formed in 1764, were Mr. Burke and Dr. Goldsmith. Among those who joined it within the next twenty years, the span of Johnson's life, were Fox, Sheridan and Windham, Adam Smith and Gibbon, Bishop Percy and Sir William Scott. . . . . Upon the whole, the character of the club has been worthily maintained. Such minds as that of Burke, or that of Johnson, do not, indeed, appear at every period, and ages may ensue before we look upon their like again; but, still giving due weight to that consideration, for the present time, a member of the club will have little cause to complain of the degeneracy of mankind so long as he enjoys the high privilege of sharing in the converse of Mr. Hallam and Mr. Macaulay, Dean Milman and Bishop Wilberforce, Dr. Holland and Monsieur Van de Weyer, Lord Lansdowne and Lord Aberdeen.\*

These lines were written in 1851, and already Lord Mahon's list has been robbed of one-half of those whose names he has catalogued as then the glory of 'the Club.'

Here, or when receiving his friends at Fulham, nothing was more remarkable than the frank kindliness of Bishop Blomfield's affection or the abundant flow of his peculiar humour and the unfailing readiness of classical allusion, epigram, or repartee, which no stress of business had been able to cloud over or impair.

He had an unfeigned relish for intellectual society, and, as his son says:—

'During the days of his health and strength the house at Fulham was filled with agreeable society; and such men as Sir James Mackintosh, Wordsworth, Rogers, the Bishop of Oxford, Sir David Dundas, Sir Henry Holland, and many others who might be named, gave no little charm to his table. At these times the Bishop entered with a keen relish into the delights of social intercourse, and contributed more than his share to the general enjoyment by the animation, the humour, and the learning of his conversation.'—Vol. ii. p. 195.

Some specimens of his lighter vein are given us in the 'Life.' We select one or two of those which seem to us the most characteristic; prefacing them, however, with saying that their quality makes us believe that they owed the acceptance they received rather to their freshness and goodnature than to any

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\* Lord Mahon's 'History of England,' vol. vi. 482.

high strain of real humour to be found in them. He writes to an intimate friend to announce his appointment, as rector of Dunton, to a Commission of the Peace in Bucks in the following words: 'I am now a magistrate, and the county business will never get on without me; I must study Burn with diligence before I can *indifferently* minister justice. (By the way, that's a very awkward expression in the Liturgy.)' (Vol. i. 30.) Again he writes, April 20, 1815: 'The Bishop has desired me to preach the Visitation Sermon, and I am at a loss for a subject. You are experienced in this species of composition, and can recommend me a topic fit for a discourse *ad Clerum*. I was thinking of discussing the utility of learning to the clerical profession; but the mention of this might give offence to my worthy brethren in the archdeaconry of Bucks; as it would be unpolite to hold forth in praise of a fair complexion to a party of negresses' (vol. i. 42). Again: 'I hope,' he writes from Chester, in October, 1824, 'from a well-conducted process of distillation, to extract some highly-rectified Spirit of Orthodoxy. An explosion or two in the course of the process must be looked for; accidents will befall the most cautious operators' (vol. i. 102). When a friend of the Bishop's was once interceding with him on behalf of a clergyman who was constantly in debt, and had more than once been insolvent, but who was a man of talents and eloquence, he concluded his eulogium by saying, 'In fact, my Lord, he is quite a St. Paul.' 'Yes,' replied the Bishop, drily, 'in prisons oft' (vol. i. p. 228). And this habit of humour lasted on to the end. Whilst he lay on his bed of last sickness, his two archdeacons severally delivered their Visitation charges;—the one selecting as his principal topic the law of burial of the dead, the other the best mode of constructing sermons. 'So,' said the Bishop, when the fact of the charges was reported to him, 'Sinclair has been charging upon composition, and Hale upon de-composition.'

This was the social side of his character. We know no part of his 'Life' which more entirely pleases us than that which by the hand of a son paints the more sacred scene of his family relations. So deep were his affections within that circle, that we believe affliction assailing him thence did more than all the vast burden of his public business to break down the strength of his body and the elasticity of his mind. What he was in the happier hours of family life we must let the pens of his children speak.

'I learned,' says a daughter, 'to reckon the hour or half-hour spent with him before breakfast as one of the happiest hours of the day. . . . My recollection of Fulham is that of a thoroughly well-ordered family. Regular and early hours, punctual attendance

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of the whole household at family prayers—cheerful evenings, enlivened with music and by the society of friends; quiet, peaceful Sundays; pleasant hours spent in the garden, in which he took such pride and delight,—these and many other such quiet domestic pictures, in which he, with his bright, loving look and kind words, is ever the central figure, rise before me when I try to recall him to my mind as he was in his own home, amongst his elder children. Or I remember him in the enjoyment of some autumnal excursion, full of fun and cheerfulness, and enjoying the scenery more than any of us. . . . . He was always in those days able to throw aside his cares and the thought of his duty during the time he spent with his family; and by entering into our occupations and amusements, as well as by conversation, music, and reading the current literature of the day, to make it a time of real refreshment to himself, as well as of pleasure and profit to us.—Life, vol. ii. p. 227.

Or take another sketch by his son:—

‘His pleasure in travelling was especially great . . . . . He seemed to take delight in change of place, in the novelties and even the inconveniences which belong to foreign travel, and above all in the charms of grand natural scenery. In a beautiful country he would stand up in the carriage, and express himself in the strongest terms of admiration, and would seem disappointed if any of his companions did not seem to share his enthusiasm. He would spend the evenings, or vacant hours of travel in turning the incidents of the day into verses, which served in his family as humorous memorials of his annual holidays.’—Vol. ii. 237.

One or two quotations from the touching relation of his last days may well close these extracts:—

‘July had arrived, and though his friends did not know it, he was fast drawing to his end.

‘It had been the Bishop’s custom throughout his illness to have read to him, with some slight alterations, the Confession and the Absolution in the Communion Service with the Lord’s Prayer, and a prayer from the Visitation of the Sick, or sometimes the “Prayer for a Sick Relation” from his own manual of prayers. For the last week or ten days he had expressed a strong desire that his children should come into his room before he went to sleep, to join in these prayers; and fearful lest his desire might not be sufficiently impressed on their minds, he called, on this evening, the only one who happened to be in at the time, after she had taken leave of him for the night, and said, “My dear child, I wish you to come *every* evening when your dear mother reads prayers with me, and all my children who can. I hope, my dear child, you will comply with my wish.”

‘On the evening of the next day . . . . . when those who were with him rose from their knees and bade him “good night,” he took leave of them with all his old tenderness of manner. They were simple words and expressions of affection that he used, and such as his

children had been accustomed to hear and to receive from him for many years; but they remembered them then, because they were almost the last words (except in short and incoherent sentences) which he addressed to them. At the time it was his manner which especially struck them, more completely that of his own self than they had noticed for some time; the energetic earnestness of his natural character adding force to his tenderness. Afterwards, when his wife bade him "good night," he detained her, and drawing her to him, told her in a low but distinct voice, that "he felt he had been a great sinner; none could know his sins better than he did himself; that repentance was a hard thing; but that he trusted humbly he had truly repented, and that he had a perfect trust in the mercy of God, through the merits of his blessed Saviour; that he was at peace with all the world; that he had not an unkind feeling to any; and that if there were any who had ever acted unkindly towards him; any who had entertained hard thoughts of him, he forgave them from the bottom of his heart" . . . . On the Sunday he had another fit; by the evening of that day all his children, with their husbands and wives, had arrived to be present at his closing hours, except two sons: one of whom was commanding his ship in the Mediterranean, while the other having started for the Continent a few days before immediate danger was anticipated, could only be recalled in time to see his father's lifeless form before it was laid in the grave. The dying Bishop lay in the chapel-like room in which are arranged the books which Bishop Porteus bequeathed to the See. To this room the invalid had been removed for coolness; and as the night wore away, the fresh breeze which had succeeded a sultry day stole in from the garden through the great open window at the lower end. On one side of the room the windows are emblazoned with the armorial bearings of different prelates; and around it are placed the portraits of all the bishops of London since the Reformation—the last vacant space having been lately filled by the portrait of Bishop Blomfield himself. All are there . . . . Surrounded by these likenesses, one who had ruled the diocese for a longer period than almost any of them, and of whom without any disparagement to his predecessors, it might be said "that he had laboured more abundantly than they all," lay with life slowly ebbing away from him, his family watching around him . . . .

'As the next day dawned he seemed to recover a little. . . . A few hours later he relapsed, and the physicians pronounced all consciousness to be gone . . . . At five o'clock on the evening of Wednesday, Aug. 5, with one slight convulsion which marked the parting of body and soul, he expired. No sooner was the death-struggle over, than his features seemed to regain the early beauty of which age and sickness had deprived them, and the lifeless face in its placid composure seemed in a moment to have lost twenty years of its age.'—Vol. ii. 271.

And so the busy day was over, and the evening won by the  
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hardworking man: 'he rested from his labours, and his works do follow him.'

It has been a pleasant task to follow this true-hearted, kindly, good, and able man along his course; and it is pleasant to mark down what in large measure, through his means, the Church which he loved and for which he laboured until death had won through his toil. She had woke up to the sense of her true position. Thenceforward nothing short of embracing in her saving labours the whole population of the land could content her aspirations. The efforts making, as we write, by the present Bishop of London for the increase of the Church's work in the metropolis are, indeed, only the natural carrying out of what was begun by Bishop Blomfield. May that result be such as to crown the noble monument which Mr. Richmond is preparing for him with the fresh flowers of a completed effort! The clergy, too, as Bishop Blomfield left them, were an altered body; from the highest to the lowest a sense of the blessing of working honestly and hard had spread on every side from the labours of the diligent man who stood in the fore-front of the field. Liberality, too, in gifts had increased largely from the blessed contagion of his good example. Speaking to Archbishop Howley of the intended move for the Colonial Episcopate, he expressed his conviction that the time was come for some gifts of unusual magnitude, and he proposed to the Archbishop what should be their respective offerings. This point settled, Archbishop Howley speaking of a third person said, 'no doubt he will like to join us in this;' and received the characteristic answer, 'He will join us, but I do not think that he will like to do so.' To this wise liberality the Church owed the extension of her colonial episcopate, and that true movement for Catholic expansion which has acted back with such a growing power on her life at home.

If we consulted only our own feelings, we should stop here. But if we are, indeed, to arrive at any just estimate of the real progress of the Church, we must weigh with equal justice the failings against the successes of the leading episcopate of the time.

With all his many great gifts then, there were, as we think, two principal defects in the character of Bishop Blomfield, closely connected together, and unhappily precisely the defects which the course of events through which the Church in his day was passing made peculiarly dangerous both to her and to himself. He lacked, it seems to us, first, that sagacious and comprehensive foresight of coming events which, where it is given,

given, breeds so entire a calmness in the critical moment of danger, that the leader of men is either equally prepared for a thoughtful readiness of action, or for remaining fearlessly inactive, as the occasion may require. It is this deliberate prescience which enables great men in any unlooked-for extremity to see in the startling suddenness of action what it is really to apply their principles, and so not only to cleave to them with the tenacity of an honest intention, but to give them practical effect in act. The want of this faculty producing, as it must, a certain confusion in the moment of action leads almost inevitably to a want of political courage. And this, we think, was the second deficiency in this otherwise great character.

Bishop Blomfield's natural temper was hasty and impulsive. His very appearance bespoke as much. Mr. Richmond's letter, as admirable as his crayon portraits, fixes this marked characteristic of the man. 'His very walk,' he says, 'was significant of this, that short firm and rapid step, with a sort of *I am ready* expression in it . . . And with the quick, almost abrupt, stop in it' (Life, i. 170). This peculiarity of the man has not escaped the notice of his son :—

'One,' he says, 'of the Bishop's most marked characteristics was a peculiar quickness of action which no amount of experience could entirely check. No man could draw a more correct conclusion from given data or in a shorter time; but the activity of his temperament was averse to protracted deliberation, and he did not always stay to examine the correctness of the data which were offered him; so that while generally as sound in his conclusions as he was wise in counsel there were some occasions when he formed his opinions too hastily. To this cause chiefly must be attributed any errors of judgement into which he fell during his episcopate.'—Life, ii. 181.

And again :—

'In his intercourse with his clergy his natural quickness and occasional abruptness of manner might at times have worn the appearance of harshness, but it was chiefly on the surface.'—ii. 211.

No doubt this was true, so far as it regards any real harshness of temper, from which he was remarkably free. But the manner bespoke, we think truly, the mode of the mind's activity. His conclusions were sudden, hasty, taken up often therefore upon a most incomplete survey of all the many present circumstances and future consequences of the case; and, though often intuitively right, they were also of necessity often wrong from their incompleteness; having at best but the promise of some short immediate relief, and that perhaps through some perilous concession,

concession, and no real solving of a difficult or important question. We have heard from those who were in frequent consultation with him that this evil increased with his years, until he grew evidently impatient of any lengthened consideration or discussion of any question; marking thus the constitutional infirmity which was at the root of those hasty decisions. Such conclusions had of necessity this further evil about them, that not having been reached after a careful estimate of all the circumstances of the case, when they came to be tried in action, and to threaten to break down, they were abandoned under the new view of the case now presented to him almost as readily as they had been adopted; or were so varied, or hedged, or explained, as to encourage the further assaults of enemies and to leave faithful supporters in difficulties and dismay.

His charge of 1842, and all that follows from it, will well illustrate our meaning. If there ever was a period in the history of our Church when such a man in such a post should on the topics which he selected have spoken with the utmost deliberation, it was then. The Church of England was evidently passing through a great crisis, and everything bespoke the importance of the time. The long rollers which followed the storm of the Reform Bill yet swelled heavily across the ecclesiastical waters. It was not long since the Prime Minister (Earl Grey) had ventured publicly to exhort the English bishops to set their house in order. His successor, too (Viscount Melbourne), at the head of a Whig Ministry, though generally careful, nay, even anxious as to his episcopal appointments, had five years before recommended one which was infinitely more indicative of what might be anticipated from the governors of the State as affecting the Church than any obiter dictum in the House of Lords. Strong personal solicitations and what Bishop Otter with characteristic meekness described as accounting for his own elevation, 'the necessity of appointing some one, and the exceeding narrowness of the field of choice' had led to the nomination of Edward Stanley to the See of Norwich. It was scarcely possible to have selected any other man equally good, honest, and loveable, who would have been so unfit for the office. This was his own most just estimate of the case; we gather that it was not very far from being that of his accomplished son when he wrote the brilliant and beautiful sketch to which we have already referred. When he had accepted the bishopric, 'the prospect of the future at first sight seemed hardly less gloomy than the separation from the past. A sphere of labour for the most part *uncongenial*\* and

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\* The italics are ours.

unknown, to an extent beyond what is usually the case with those who are elevated to the episcopate. . . . an anticipation of a hostile or cold reception in his new post' (Life of Bp. Stanley, p. 26). The words of the Bishop himself are still stronger, for he avows his 'reluctance not to say *aversion* for an office for which in many respects I feel myself so *peculiarly unfitted*' (Life, pp. 26, 27). The event did not, we think, contradict these anticipations. His simple goodness, his perfectly unflinching honesty, his sweetness of disposition, his unwearied labours, wrought indeed in his high post their inevitable results. He found the diocese in many respects in a state of, even then, unusual spiritual prostration. Its condition as it is painted in the Bishop's life bears out abundantly our former estimate of the great lassitude which had fallen everywhere on our Church, and peculiarly at Norwich, through the long neglect of Bishop Bathurst. This is briefly the state in which we are told that he found the diocese. 'Non-residence, pluralities, one instead of two services once a week or sometimes only once a fortnight, an abuse which had reached such a pitch as to have produced one instance in which fifteen churches were served by three brothers; carelessness in admissions to Holy Orders, imperfect administration of the rites of baptism and burial, &c.' (Life, p. 30). All this he set himself to redress, and great was his success.

'The greater evils which have been specially alluded to,' says his biographer, 'were at last broken down. By careful enforcement of the Plurality and Non-Residence Acts, one hundred additional parsonage houses were erected by the seventh year of his episcopate, and by the twelfth year one hundred and seventy-three . . . The increase of residence . . . may be best gathered from two instances selected at random from different parts of the diocese.

"In 1857," said a gentleman in the neighbourhood of Norwich, "I saw from my windows nine parishes, of which only one contained a resident clergyman. Of those nine parishes, there is now (in 1849) only one which does not contain a resident clergyman." "The deanery of Sandford," writes a clergyman from that district, "is made up of twenty-eight parishes, containing a population of about 12,000; and owing to the number of resident gentry and clergy, the value of the rural benefices, and the great width (? wealth) of the district, you might naturally expect to find the church in a more efficient condition than in the generality of such neighbourhoods. When I first came here, in 1837, out of the twenty-eight parishes five churches only were open for divine service twice on the Lord's-day. In 1849, all the parishes enjoy this great blessing, with the exception of three, in one of which the population does not amount to fifty persons, and the stipend of another does not reach 60*l.* yearly." —Life, p. 35.

On



On such labours and on successes the good man could look back with thankfulness to God when he recorded in his diary 'in a few months I shall have attained the threescore years and ten, and closed the eleventh year of my episcopal life . . . and I feel satisfaction in what I have been instrumental in doing. How many parishes have been supplied with resident clergy in which no pastoral care had been for years and years manifested. How many churches have had the full measure of services prescribed in which, from time immemorial, the most scanty administration had sufficed. And how many schools have been established, for the benefit of the thousands who had been with the most culpable negligence permitted to remain brutalised, and uncivilised, and perishing for lack of knowledge' (*Life*, p. 95). It is touching, from such a record, to turn onwards a few pages in the *Memoir*, and read that the last wanderings of his dying bed, afar from his diocese, still ran upon thoughts of his charge at home. 'Then,' murmured the tongue of the departing and now unconscious Bishop, 'then I shall be within reach of Norwich, to return for the cholera' (*Memoir*, p. 98). The distribution of money to schools, and the enforcement of full services in small congregations, 'still flitted before the eye of his mind, and found such utterance as this—"if they are but twenty, they ought to have their double service"' (*Life*, p. 8). 'He had found,' writes one who well knew the condition of the diocese before and after his arrival, 'it a wilderness, and he left it comparatively a cultivated field' (*Memoir*, p. 85). Few of our bishops were personally better known than he; and his appearance, on which his son evidently loves loyally to dwell, bespoke for him at once the kindly feelings of all who came into contact with him. The open countenance, the quick bright eye, the elastic step, the hearty feeling, and the profusion of snow-white hair which imparted to his appearance a solemnity beyond his years, are expressions which show how lovingly the son dwells in remembrance on that most attractive beauty of his father, which promised all the frank, free, manly kindness which future intercourse so abundantly fulfilled.

And yet much as he did, and such as he was, we cannot coincide in even the doubtfully expressed conclusion, 'that the sacred office in which the struggle [of his life] was carried on, gained more than it lost from the infusion of elements unlike those which it ordinarily includes' (*Memoir*, p. 7).

The bent of his own soul had been to the noble service of the Royal Navy; and had family circumstances not forced him into Holy Orders, and political intrigue into the episcopate, there  
would

would scarcely have been a shadow to note in what must have been the glorious career of this brave, honest, frank, ardent, and most loveable man.

‘*Hæu miserande puer! Siqua fata aspera rumpas,  
Tu Marcellus eris.*’\*

But turned away from that profession in which his soul delighted, to one for which he entertained an aversion, though he honestly set himself to discharge with all the might of his manly soul, so far as he understood them, the duties of the post he occupied, and though he fulfilled so much, yet it is not possible for us to doubt the correctness of his own original decision, which was that, except on one point (of which a word presently), that it was ‘a situation for which he was unqualified and unfit’ (Memoir, p. 27).

The one exceptional point, as he esteemed it, of fitness touches the very central ground of our conviction of his real unfitness for the post. It was, that he might make it the occasion of ‘extending liberal sentiments in his profession’ (Mem. p. 27). What these words meant in his mouth may best be learned from a glance at the diocesan troubles which set in with his episcopate, and on which Dr. Stanley has lightly touched in his interesting Memoir. Amongst these troubles the author of the ‘Memoir’ mentions two special acts by which he first alarmed the Church-feeling of his diocese. The first was, that in his first sermon in his cathedral, at his installation, before a great gathering of clergy and laity, and before all the Church Societies, he proclaimed his belief that Dissent, even rising to the height of Socinianism, was not chargeable with the guilt of schism, which rested more frequently with the intolerant Churchman than with the toleration-claiming Dissenter. This was bad enough; but the offence reached its height when his clergy met at their Bishop’s table the leading preacher of the city, who denied the Godhead of our Lord. This storm was scarcely abated before the second was stirred up by the appearance of his name, unintentionally, his biographer says, on his part so far as its being made public goes, as subscribing for the publication of a volume of sermons by ‘an old Unitarian minister at Newcastle-upon-Tyne’ (Memoir, p. 61).

We cannot wonder at the outbreak that followed. All who knew him knew that these were not accidental slips, but acts whereby he was deliberately carrying out that ‘for which I mainly accepted my office,—the disseminating a wider and more comprehensive spirit of Christianity throughout the land’ (Me-

\* Æn. lib. vi. l. 883.

moir, 53). They knew, in the language of his biographer, that 'he took the side of free and comprehensive, instead of *precise* and exclusive views; and that to impress them upon others was one chief interest of his new situation' (Memoir, p. 52). They found that 'a practical representation of religion' was contrasted in his mind with 'more dogmatic systems;' and finding all this reach up to the cardinal doctrine of the Godhead of the Eternal Son, and of necessary consequence to every doctrine and every practice of the Church, they came to the conclusion that, good and true and laborious and simple as he was, there was at least one fundamental part of the new duties, for the discharge of which he had made himself responsible, which he did not intend to attempt to discharge, and which he had taken the high office he held mainly to induce others to neglect, namely, 'the being ready, with all faithful diligence, to banish and drive away all erroneous and strange doctrines contrary to God's Word; and both privately and openly to call upon and encourage others to the same.'\* All this was not the less alarming, because he applied so different a canon to those studies of nature which had such a hold on his affections. He had no 'indisposition to scientific or exact study in the abstract, for on his own subject no man could be a more diligent student' (Memoir, p. 54); it was only on the most dogmatic of all sciences, and on that as to which he was bound to be the special supporter of dogmatic teaching, that he lived for the purpose of making all teaching undogmatical. His estimate of the study of dogmatic theology is apparently expressed by himself in the following characteristic declaration: 'I have now passed into another channel, and my studies are turned to subjects with which, in self-defence, I must familiarize myself, connected as they are with subtle niceties, disputations, controversies, and too often party differences, the worse for being masqueraded under religion' (Memoir, p. 83).

As might be expected from the simple honesty of his character, what he was in his diocese he was elsewhere. Thus being appointed in due course to preach at St. Paul's Cathedral before the Archbishop and Bishops, and the Authorities of the City, the Annual Sermon for the Gospel Propagation Society, he took occasion to 'disavow' his belief in the 'Apostolical Succession' of his own orders, as being a belief from which 'as the very fountain-head originally flowed the late extravagances of the Oxford School' (Memoir, pp. 62, 63). And in the House of Lords he rarely spoke except to support some view which was at variance with maintaining as necessary truth the Creeds of

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\* 'The Book of Common Prayer.' Consecration of Bishops.

members

members of his Church. Thus in May, 1840, he warmly supported a petition for altering the terms of clerical Subscription. The habitual mildness of Archbishop Howley was stirred up by this Speech to some severity of censure, whilst, as his son tells us, 'there was something in the tone and spirit of Bishop Stanley's Speech which was peculiarly irritating to Bishop Blomfield. He rose, and with unusual severity rebuked both the petition and its supporter.'\* It is eminently characteristic of both men that the same writer can add afterwards the honourable tribute to the kindness of both that, though 'there were no two prelates on the Bench who differed more widely both in theory and practice . . . yet amidst all these differences, and though occasionally arrayed against each other, these two men heartily appreciated each other's characters and work. Bishop Stanley used to say that he was better understood by the Bishop of London than by any other of the Bishops' (vol. ii. p. 221).

In this Episcopate there was a startling sign of the times, and from his point of view no one ought to have been more able to estimate aright its meaning and its danger than the Bishop of London. It was a plain threatening aimed at the distinctive teaching of the Church of England. Who can estimate even now how far the very goodness of such a man has not helped forward that unsettlement, which we see so abundantly around us, of all belief in revelation as absolutely and certainly *THE TRUTH*? There were those then about the Bishop of London who appreciated keenly the greatness of the danger. They still believed in the Church of England: they worked, often we think mistakenly, but with all their hearts, to secure for her the distinct unfaltering utterance of all primitive truth, and the maintenance of all Catholic practices which she had not been compelled to surrender, in order to shelter her children from mediæval or Papal corruption.

Beside them, and watching with a not unnatural suspicion all their movements, stood the remains of that party with which, as we have seen, the Bishop of Calcutta was identified. A calm comprehensive survey of the present posture and coming dangers of the Church, such as Athanasius would have taken from his heights of Catholic dogma, or St. Basil from his fortress of devout administration, would have revealed to the watcher the reality and the near approach of the coming danger. He would have known that the very wheels of time must roll backward before England could be again Popish; but that every influence of the world of letters, of the world of business, and of the world of politics, threatened to make it unbelieving. The scoffer and the sceptic

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\* 'Life of Bishop Blomfield,' vol. ii. p. 16.

already paraded their presence, their doubts, and their gibes in our very streets; and the whole flow of thought was, in religious matters, towards independence, self-assertion, and lawlessness. At such a time a thoroughly prescient spirit would, above all things, have feared doing or saying anything which could set against each other schools which, though they differed in many things, represented in common a master belief in a fixed and definite Revelation. If those who were risking all for Catholic faith and observance; if those who held as their one spiritual inheritance a belief that the apprehension of the doctrine of the Atonement and of the Spirit's influences lay at the root of all individual life in God; if, lastly, those who received passively, but held firmly, the old Anglican teaching, leaning neither to the individualism of the last, nor to the objective yearnings of the first class; if these three could have been brought to act really together, where might not now the Church of England be?

Some faint apprehensions of this crisis visited, perhaps, the mind of Bishop Blomfield. But he had neither the theological learning nor the calm sagacious reflectedness necessary for working out into a whole and unbroken pattern such tangled threads of such confused colours. He had few fears; and in this highly electric condition of the atmosphere, he ventured abroad with every instrument unsheathed which could awaken and draw on himself the slumbering tempest. Not content with administering rebukes to the one party and cold allowance to the other, and thus dividing what should have been united, he proceeded to utter *ex-cathedra* canons as to ritual observance, which were sure to be taken by one set as a triumph, and by another as a humiliation. This was the more unfortunate because the diversities he set himself to reprehend, having no real basis even in opinion, were beginning to fade away, and were only brought prominently into notice, and made important by his Charge concerning them. Even if it were clear that he rightly interpreted the rubric when he laid it down, that the surplice should be worn in morning prayer alike in the pulpit and at the altar, yet we are sure that the attempt of a single bishop to lay down such a rule for the present practice of his diocese argued small previous consideration and little comprehensive discernment of the signs of the times. He himself believed, and his biographer still thinks, that the Charge was at first well received, and that all that it advised might have been adopted but that—*intonuit lævo*—Islington thundered. But the Bishop's miscalculation lay in this that he did not from the first perceive that Islington was sure to thunder. Accordingly, when the storm broke out he was helpless. Nothing could exceed what was soon the pain of his position.

tion. For the dutiful, the quiet, and the loyal had acted on his words; and, in so doing, when the trouble came, were exposed to the plain and ready-made reproaches which were certain to find utterance. And here came into view his other great infirmity. No man was more astonished than he was at the greatness of the tempest into which he had unawares put forth, and so his impulse was to escape from its violence. In every parish which resisted, he granted a license to disobey. Thus in every rebellious place the obnoxious edicts were repealed, and Islington triumphed. The Archbishop came forth, with the stately wisdom of his long-tried moderation, to his brother's succour, and snatched him from the conflict; but the loyal and the obedient were left behind to struggle as they could from a position they had been exhorted to occupy by an authority which withdrew their colours when the strife was hottest.

We have no wish to dwell upon this painful subject. There is another portion of his life upon which his son enters at some length; on which for the same reason we shall only touch. We mean the troubles in his diocese which woke up under the subsequent development of ritualistic fervour. In these there was, we conceive, something to regret on both sides. But on the Bishop's we think that nearly all was caused by that want of a far-sighted view of which we have spoken. It made him, even where his zeal put him at the head of the actual column, unable to sympathise with many views, and so unable to guide them into safe and useful channels. He could only try to stop them; and the attempt to stay such a current is like damming up a torrent: the resistance is soon overborne, and makes the rush greater and the roar louder. The same habit of mind which, as a younger man, had prevented him with all his entire honesty from feeling that there was anything wrong in holding together distant livings, made him now unable to reach in imagination or feeling beyond the exact standard of ritualism which habit had led him to think the best. This he somewhat roughly determined to enforce; and when the law was used to cover what he disapproved, he felt to those who so employed it as if they met him with ungenerous quibbles. We are far from saying that he always met with the treatment which his generous nature deserved, and under which it would have been won to greater tolerance towards those of whose line of action he disapproved; but neither can we agree with his son's estimate of these unhappy days, and charge all their evil upon the other side. It was a great misfortune to him and to the Church's peace that he should have been challenged as he was to this particular encounter.

But

But we fear that we must say that something of the same display of this twofold weakness pervaded the Bishop's attempts to exercise other of the highest functions of his office. Here we are entirely at variance with his filial biographer. 'Bishop Blomfield,' he says, 'was emphatically the statesman of the Church.' He was, as we hope that we have shown, great in many ways, but these peculiar defects of his character in our judgement emphatically deprived him of the high palm of great ecclesiastical statesmanship. The very activity of his mind made the action of these two defects more dangerous. Alarm in many minds produces quiescence, and quiescence has always a certain safety about it; but alarm in his busy nature prompted to instant action, and action under the prompting of fear is pre-eminently perilous. This weakness is what Sydney Smith touched when he represented the first action of the alarmed episcopate to be the casting out their dinner to appease the clamorous mob below, and then ordering for their own repast that which had been ordered for the canons.\* This was indeed one of the features of his character which the facetious Canon most often used against the Bishop; 'his ungovernable passion for business and constitutional impetuosity' were the very scope for his darts.

We cannot help feeling that it was largely owing, first to his want of apprehending what were the great services which the Cathedral Chapters were fitted to perform for religion and the Church, and then to his alarm when the cry of Church Reform sounded loud and ominous, that the reconstitution of those bodies took the strange and unnatural course of preserving in them every evil of the old system, whilst it maintained them on a scale so much reduced that they could no longer supply the incidental benefits with which in their days of abundance they had in many cases at least disguised their anomalies. These evils were suggested to him in the 'Letters' of Sydney Smith; but perhaps it would be too much to expect any man to have taken such a lesson from so sarcastic an instructor. And yet how full of truth was the warning! 'It is quite absurd,' he writes, 'to see how all the cathedrals are to be trimmed to an exact Procrustes pattern. *Quieta movere* is the motto of the Commission: there is to be everywhere a Dean and four Residentiaries;' and after suggesting some of the lower uses to which Chapters might be put, he continues: 'This view of Chapters is, of course, overlooked by a Commission of Bishops, just as all mention of bridles would be omitted in a meeting of horses; but in this view Chapters might be made eminently useful. In what pro-

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\* 'First Letter to Archdeacon Singleton.'

fessions, too, are there no gradations? Why is the Church of England to be nothing but a collection of beggars and Bishops? the Right Reverend Dives in the palace, and Lazarus in Orders at the gate, doctored by dogs and comforted with crumbs.\* Strong as was the sense of these caustic sentences, the Bishop adhered to the mechanical reform which had been at first suggested by him, and which has ever since threatened the existence of these invaluable institutions.

This inaptitude for looking steadily onward with the forecasting eye of the 'seer,' seems to us to be conspicuous throughout his course. It might perhaps be too much to expect that in mere political questions he should have possessed this faculty, and so have been saved from his change of policy on the Reform Bill; but on strictly Church measures there was the same lack of foresight. Two instances will illustrate our meaning. The increase of the Episcopate was the great instrument for the Church's extension, on which the eyes of thoughtful minds were set, when very much through his influence the See of Bristol was, in fact, merged in that of Gloucester, and whilst he was warmly supporting the union of Bangor and St. Asaph. It was not, indeed, until the evident change of popular feeling had shown that this last union could not be accomplished, that he joined those who would not agree to such a backward step as the suppression of an English See. The other instance to which we refer was his treatment of the great question of the restoration of synodal action in the Church. Far-sighted men had, with more or less clearness, foreseen for years that, under the changed aspect of the times, this was essential to the welfare of the Church. They saw that the absence of free discussion between clergymen under the restraints of that sense of responsibility which is ever bred by the consciousness of being met in a 'lawful assembly,' had already led to the prevalence of far more unrestrained discussions, under no authority, and where the absence of all duly recognised chiefs gave to those who could fill it with least advantage to the Church the actual position of the guides of thought and action amongst their brethren. Further, they saw that the time was come when, whether to resist injurious changes, the imposition of which might be attempted from without, or so to mould from within existing institutions as to make them equal to the new requirements of an expanding body, the clergy must be allowed to exercise their undoubted right of forming and expressing their opinion by full and free debate upon all suggested changes and all needful improvements in the system of their Church. For thus only can

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\* 'First Letter to Archdeacon Singleton.' Works, p. 261.



any change be constitutionally made which affects the National Church; since her existing system is the result of the joint assents of the clergy, the laity, and the Crown of England.

All this had possessed long the minds of many who were content to prepare cautiously the way and wait with patience for what they had resolved to gain. They strove hard to win the mind of Bishop Blomfield to their view; but here again his foresight failed him. In 1827 he wrote to Bishop Monk, who had preached to the Convocation against its revival. 'I like your oratiuncula greatly. It . . . touches upon a variety of important topics with propriety and good sense, *particularly* upon the inexpediency of an operative Convocation.'

Again, in 1832 he wrote to the Archbishop of Canterbury, 'We do not wish for a Convocation;' and in 1833 to a clergyman, 'I am much inclined to doubt whether it be expedient to revive the ancient functions of Convocation as at present constituted' (Life, 162).

It was nearly ten years later, and not until the victory was already won by the Archbishop having consented to hold a regular session and to permit petitions to be presented and received, so awakening the venerable Synod from its long and occasional dreams, that Bishop Blomfield joined the conquering side. Then with his wonted generosity of spirit he entered at once into the movement, no lingering jealousy of its having been begun by others finding place in his mind, but for the future working freely with it as if it had from the first been his own conception.

We have said, we believe, enough to satisfy justice and the claims of just criticism on this less pleasing side of the picture, and we gladly let the curtain fall. To one act, indeed, of his expiring episcopate we must allude, but it shall only be to say that we do not believe that if sickness had not already bowed the strong man, he would ever have acquiesced in that resignation of the See, the Bill for effecting which his son says 'was opposed by such Churchmen as Mr. Gladstone, the Bishop of Oxford, and Sir William Heathcote' (Life, ii. p. 244). We are not sure whether this is not uttered in a tone something like ironical complaint. But of this we entertain no doubt, that posterity will most assuredly ratify the wisdom of their opposition to the Bill. It was undoubtedly a startling proposition to make two great exceptions to the universal rule of the Church of England: suffering two great Prelates to resign their sees and retain for life a large share of their endowments, when any private compact to allow a beneficed clergyman the same licence would be

voided by the statute against simony. Its provisions never have been, and we trust and believe never will be, repeated in any other instance.

We have sought to set fairly before our readers these three indicative lives. Not only from our estimate of their great intrinsic interest, but because we believe them to contain richly the materials from which the religious character and prospects of our own time are to be gathered. For in these Memoirs the history of our Church in these latter days is not indistinctly written. We hope that our readers will not have failed to trace the golden thread through our own pages. It cannot, we think, be doubted that it is a record of progress—of real and important progress; perhaps we may even say of progress in every direction. The Church has far more completely than heretofore learned to realize her own principles and position, and this in great measure by the curative and healthful processes of honest and laborious action. Many mists have been swept away; many questions solved; a far higher sense of duty become general; the idea of worship has revived; preaching instead of being undervalued has risen in general estimation; witness the nave services in our Cathedrals, and the leading articles of our newspapers; and yet it has taken far more its true second place in our ideas of worship, not because it has sunk, but because prayer has risen in our ordinary estimation. With far less tendency to the corruptions of Rome, we have put forth more abundantly at home the blessed shoots of a loving charity. Our churches have been restored, in some dioceses even marvellously; larger provision has been made for works of charity; sisterhoods have been founded and matured, in which the quick energies of Christian women, wedded to a life of devotion, can be combined and regulated; associations have risen on every side for increasing Church accommodation, the ministry of the Word and Sacraments, and the education of all orders and degrees amongst us. Coeval with these signs of life, there may be traced on all sides more unity, diminished suspicion, amongst those who have not yet learned to feel aright the degradations of party designations within the Church Catholic, and this with no repression of the open avowal of legitimate differences; with the laity taking more share than they ever did before in all Church matters; with Convocation sitting regularly, and discussing freely every Church question; and daily more and more referred to both in and out of Parliament as the proper exponent of the views of the Clergy of England.

Moreover, as the vitality of the Church has been quickened, the strength of the Establishment has been found greater. Far-sighted

sighted politicians have discerned that the time has passed when she was to be esteemed as a poor relation whom it was not reputable to disavow nor possible to acknowledge without certain loss; and merely worldly men have wondered at the strange revival of what they had come to esteem a doomed cause, and whisper that after all it is the strongest institution in the country. The change in the votes of the same House of Commons on such questions as the incestuous Marriage Bill and the Church Rate Bill is strongly indicative of the altered tone of public feeling and opinion.

To all this appearance of good there is undoubtedly a reverse side. The light would not be the light of Heaven if it did not deepen the shadows of earth. There is the active stirring amongst us of a spirit of scepticism. Having dealt expressly with this elsewhere, we do but touch upon it here. It is probably an inevitable concomitant of our progress and our circumstances. The rising of the Sun draws up the mists which it is gathering its strength to dissipate. It is a far healthier state to have differences declared and difficulties stated, than to stagnate in an enforced acquiescence in what the intellect disavows and the heart rejects. Amongst ourselves we have little fear of the issue. If the Church be true to herself, and if evil councils in the State do not precipitate dangers by forcing into her highest posts men who are either the feeble echoes of its own vacillation, or who are false to the truths and principles to keep and proclaim which their office was founded, or who are distrusted by the clergy of the body they have to govern, all will speedily be well, and the sky the clearer for the clouds which have swept over it:

In such a time of coming strength the difficult questions yet before us may perhaps be dealt with safely. They are political rather than religious, and yet they touch to the quick the national religion. They have relation to the mode in which the result of that concordat between the Church Catholic and this realm, which we commonly designate as the Established Church, can without compromise be maintained, and yet the perfect liberty—political, social, and religious—of the surrounding sects be established. They relate to the increase of and the appointments to the episcopate; to the measures and degrees of self-government to be allowed or encouraged in the Church; with all the other questions this involves, of reformed Canons for her discipline and new or adapted Services for her need. In the face of her recent progress, her growing unity, her enlarged efficiency, and her widened basis of general esteem, we doubt not that the good time

will come when through the co-operation of her highest prelates (appointed for their strength rather than for their weakness), with statesmen of honesty and character, who belong in truth to her communion, the difficulties of her position may be contemplated with wisdom, encountered with courage, and arranged with justice and success. Come when it may, we are firmly convinced that the way for its happy arrival was in good measure prepared, if not by the far-sighting sagacity, yet by the honest, hearty, self-denying labours and nobly disinterested liberality of the late Bishop Blomfield.

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#### ERRATUM TO VOL. 113.

P. 527, l. 13, *for* "Montauban," *read* "Montmartre."

At the request of Captain Jesse, whose account of what he saw in Paris, in December, 1851, is noticed in the passage above corrected, we add that in the remarks which we then made, and which are entirely general in their nature, we had no intention to impugn the courage or the veracity of that gentleman. Captain Jesse is the author of 'Notes of a Half-pay in Search of Health,' which was reviewed in Vol. 69, of the Quarterly Review.

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